# SUPPLY CHAIN MANAGEMENT PRACTICES, GOVERNMENT POLICY AND PROCUREMENT FUNCTION PERFORMANCE IN KAKAMEGA COUNTY, KENYA

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**A Thesis Submitted in Partial Fulfillment of the Requirements for Degree of Master of Business Administration (Logistics and Supply Chain Management Option) School of Business and Economics of Masinde Muliro University of Science and Technology**

**2023**

## DECLARATION

This Thesis is my original work which is being forwarded for the first time to the university.

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## CERTIFICATION

The under designed having gone through this thesis hereby recommends for affirmation by Masinde Muliro University of Science and Technology, study titled "**Supply Chain Management Practices, Government Policy and Procurement Function Performance in Kakamega County, Kenya."** In partial fulfillment of the requirements for the degree of master's in business administration (Logistics and Supply Chain Management) of Masinde Muliro University of Science and Technology

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## DEDICATION

This thesis is dedicated to my dear wife Naomy, our beloved children: Jed, Janice, Jabez, Jason and our parents for their moral support during my studies, their encouragement came in handy while undertaking this research.

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## ABSTRACT

In every organization procurement function plays an important role. Due to competition and a fast changing market environment many organizations have started implementing supply chain management practices so as to survive in the long run. The study established Supply Chain Management Practices, Government Policy and Procurement Function Performance in Kakamega County, Kenya**.** Specifically, established the effect of Procurement Planning on procurement function performance in Kakamega County Government, determined how supplier selection affects procurement function performance in Kakamega County Government, ,assessed how buyer-supplier relationship affects procurement function performance in Kakamega County, found out how information sharing affects procurement function performance in Kakamega County, and determined the moderating effect of Government Policy on the relationship between supply chain management practices and procurement function performance in Kakamega county, Kenya. This study was guided by five null hypotheses. The review of the literature consisted of theoretical review and empirical review. The study was guided by Network perspective theory, Systems theory and principal-agent theory. The conceptual framework consisted of three kinds of variables: independent variables, dependent variables and moderating variable. The study adopted a cross-sectional research design involving a target population of all staff members in the procurement department. Census was used. Primary data was collected using questionnaires which was administered through drop and pick method. The researcher used test re-tests method to test reliability of data collection instruments. Pilot study was conducted in Samburu County. Analysis of data was done using descriptive statistics. The study findings were presented in tables. Findings were; supplier selection, buyer-supplier relationship and information sharing were strong predictors of procurement function performance. Procurement planning indicated a positive but non-significant change in procurement function performance. Government policy had non-significant moderating effect between supply chain management practices and procurement function performance. Recommendation, the combined effect of procurement planning, supplier selection, buyer supplier relation and information sharing on procurement function performance in Kakamega county, was positive and statistically significant. Hence the study recommends the application of all these variables be adopted to enhance procurement function performance. In conclusion, County governments in Kenya can enhance procurement function performance levels by embracing supply chain management practices and putting up infrastructure that can help in the implementation of supply chain management practices.

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## LIST OF ABBREVIATIONS AND ACRONYMS

**PPDA**- Public Procurement and Disposal Act

**EAPCC**- East Africa Portland Cement Company

**NGO**- Non-Governmental Organization

**SCP**- Supply Chain Practices

**SCI** – Supply Chain Integration

**OP**- Organization Performance

**PPOA**- Public Procurement Oversight Authority

**PPRA**-Public Procurement Review Authority

**PWC**- Price Waters Coopers

**IT**- Information Technology

**SCM**-Supply Chain Management

SCMPs- Supply Chain Management Practices

**SGS**- School of Graduates

**ESI**- Early Supplier Involvement

**OECD**- Organization for Economic Co-operation and Development

**NACOSTI-** National Commission for Science Technology and Innovation

## DEFINITION OF OPERATIONAL TERMS

**Supply Chain Management-** Act of streamlining various county activities to enhance value to clients and earn good reputation.

**Procurement Planning-** Laying down what is to be done in the acquisition process and advising how resources are to be assembled to enable meet objectives.

**Buyer-Supplier Relationship-** Is a business interconnection between buying firms and supplying firms for the purpose of a win-win benefit.

**Information Sharing-** Exchange of knowledge and ideas among the parties involved in business transactions**.**

**Supply Chain-** A web where parties like persons, entities and resources interact meeting purchasing rights of clients.

**Supplier Selection-** Picking suppliers that meet requirements to the operationalize county services. For example, years of experience, financial capabilities and machinery.

**Partnership-** Oneness of parties to exchange resources that enhance value and sustainability.

**Procurement function-** An integral unit in an organization (county government) responsible for coordinating and managing all activities related to acquisition of works, goods and services.

# CHAPTER ONE

# INTRODUCTION

This chapter consists of the background of the study, statement of the problem, objectives of the study outlined as general and specific, research hypothesis, significance of the study and finally the scope of the study.

## 1.1 Background of the study

Supply Chain Management is overall control of all supply chain activities that includes purchasing, procurement, logistics, transport, warehouse, stores, stock control, management of contract and distribution. The aim is to create value and achieve procuring organization's core objectives, PPDA (2015).

Globally, Gorane and Kant (2017) conducted a study on Supply chain practices and organizational performance in Indian processing firms. Study realized how implementation of SCMPs enhances operational performance in organizations. Customer satisfactions and successful overall organization wellbeing is as a result of implementation of SCMPs. The study however did not consider all possible supply chain issues addressed in the study. The research majorly focused on manufacturing industry. The researcher recommended a study to be carried out in different firms and entities for comparison and refinement of study outcomes. The current study examines how these SCMPs influence procurement function performance in Kakamega County, Kenya.

Abdallah (2014) opined that not all SCMPs, impacted performance. Internal and customer integration postponement influence how firms realize their business objectives. However, the extent of access to knowledge have not much influence on firm's performance. Khan and Siddiqui (2018) observed that strategic supplier partnership and quality of knowledge access had a significant effect on performance of medicine outlets in Pakistan.

A study conducted by Alshboul et al (2017) a case of Jordan processing firms indicated that supply chain management practices significantly affects manufacturing firm's business results and operations. Lenny, Demirbag, Bayraktar,Tatoglu, and Zaim, (2007), carried out a research on SMEs in Instabul,Turkey. The study used exploratory factor analysis and the results indicated that obtaining resources from without the firm, using of wide base of suppliers as well as encouraging partnerships in business significantly influenced organization performance. In addition, Palandeng, et. al (2018) in their study in Bitung city using survey method reiterated that companies must employ supply chain management practices for the realization of positive outcomes. They further opined that flexibility and firm's ability to outsmart its competitors solely depends on the extent to which that firm embraces such practices. However, the study further indicated that these supply chain management practices do not have a major influence on the firm's performance. These studies gave mixed result that the current study sought to refine.

Regionally, Shobayo (2017) established that supply outcome is not influenced by procurement performance. The research focused on operational performance using regression model. The study did not use primary source of data. These presents a methodological and conceptual gaps. The current study used cross-sectional design and obtained first-hand information from respondents. Eyaa and Ntayi (2010) found out that the SCMPs and organizational level of output have a direct correlation with each other. Ohue and Akhator (2021) showed that brewing firms in south-south Nigeria employed SCMPs which influenced their performance. These studies present mixed results that the current study refined. Mutangana, (2019) Observed that Supply chain management practices significantly affected how Uganda drinks manufacturing companies performed. These practices gave the firms an upper hand against its competitors in the market as well as better business results. A study conducted by Adebeyi et al. (2021) posited that information sharing have no impact on the level of outcome in processing industries. The study further indicated that customer relationship, material flow management and lean production strongly influenced organizational performance. A survey research design was employed

by the researcher. These presents methodological and conceptual gaps. The current study was done in Kenya on supply chain management practices, government policy and procurement function performance in Kakamega county, Kenya and a cross-sectional research design was used.

In Kenya, Wambua and Kagiri (2019) established that organizational performance was positively influenced long term commitment of providers of supplies, handling of uncertainties, result oriented business relationship related to supply. Watiri and Kihara (2017) found out that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors. How the companies relate to their customers enables them outsmart their competitors since their customers are able to differentiate their products from those of competitors.

Maroma (2017) employed resource based theory, partner selection and transaction cost economic theory in their study. The study revealed that efficient planning should be enhanced in procurement practices so as improve performance of Nyamache factory in Kisii County. Policies set should be fully implemented so as to effectively and efficiently implement procurement practices without struggle. A study by Kaaria et al (2020) used a cross-sectional descriptive research design while carrying a study on public universities in Kenya. It was indicated that strategic partnership, stock control and management of finances as basic resources to organizations which significantly affects performance levels of an organization. Further indicated that procurement planning has an insignificant relationship to supply chain performance. Any institution private or public, successful performance is majorly influenced by the procurement practices employed by the organization and how effective they are put in place, (Kaaria 2020).

### 1.1.1 Supply Chain Management Practices(SCMPs)

Supply chain management practices are those operations done by organizations to ensure efficiency in its procurement function performance, (Sollish and Semanik, 2012). The adoption of procurement

practice may be embraced by all firms irrespective of the environment in which they operate. Turner (2011) reiterated that adoption of procurement practices is a turnaround from the old practice and thus must be approached from an opportunity value adding point of view rather than a process stagnation.

The council of supply chain management professionals (2010) source and exchange of information in an administration channels whose genesis is consumable deliveries. These indicates that various parties are involved in the supply chain like suppliers, consumers and the service providers that provide the link in the supply chain. Mayaka (2015) observed that, SCM is streamlining various business activities in order to enhance value to customers and thus gain a wider market share and outsmart competitors. According to Cooper (2000), supply chain management practices seeks to harmonize flow of products from producer to final consumer and largely meet demand at a lower cost and better quality.

According to Agus (2011), supply chain management practices include buyer-supplier relationship, procurement planning, training, cooperate social responsibility, supplier selection process, information sharing, inventory control as seen in many well doing entities. In order to improve performance, firms should embrace and focus on supply chain practices that have proved when properly implemented contributed tremendously on its general output.

### 1.1.2 Procurement Function Performance

Supply chain, according to Carr and Pearson (2002) is the arrangement of usable components and IT that are employed to manufacture and dispose of output delivered by suppliers to process and eventually to end consumers. Joel (2010) posited that procurement function involves activities from product production to product development via information system that necessitates the activities. Supply chain management therefore, is a link, a network that manages product from production to consumption, (Coyle 2013). Further reiterated that activities in the supply chain entails everything from the production of product, its development, sourcing and the logistical aspect inclusive of information system essential in coordinating the phases involved.

Public procurement enables the government to realize its goal by ensuring quality services and products and capacities are accessed. According to OECD, (2015) the primary and basic aim of purchase by state and state run entities is to deliver goods and services to the public in an economical, timely and efficient way. Public procurement forms part of the activities that make use of the citizen's money who pay tax thus forming a sensitive realm that must bring off efficiency and high quality to shield the public interest. The supply chain management constitutes the critical part in the government activities in delivery of services to the public. OECD, (2019) opined that the well-being of the citizens in a nation is impacted directly by the capacity and capability of the public procurement. Further added that Ability to provide economic development, quality services, innovation and creation of more jobs through savings largely relies on a how well the supply chain is done since it's is core and constitutional activity of government affects all aspects of citizens wellbeing.

Performance is the ability to achieve targeted objective through coordination of other committed parties. According to Rotich, Muma and Micheni (2016) procurement performance concept subsisted since early 1930s.Procurement function performance is a continuing, never-ending non-segregated process that regularly need reforms and assessments, (Osoro and Musau, 2018). For any institution to perform, supply chain need to be effective in every activity. Performance can be measured by how efficiently the system operates and how those who work in the supply chain are rewarded. The needs of clients must be met (Hines, 2004). There is need in the county government to adopt the procurement policies fully for it to realize its mission. Actualization of the county strategic plans and implementation of procedures set by the regulatory bodies results to better quality services thus enhanced performance.

Procurement function performance is a tool employed by organisations as a competitive tool that enhances the overall operations especially producing goods and services as well as realization of profits this ensures well-being of county citizens. Zhang and Okoroafo (2015) views procurement function performance as the capacity of an organisation to lower its cost in logistic and operation by observing the purchasing rights. Organisations are now shifting from individual performance to that of

procurement for improvement of bottom line issues in the whole system. According to Parasuraman (2002), dual examination on institution productivity in terms of service delivery is the best approach. He further proposed that this approach can help strike a balance in conflict reconciliation and synergies thus enhance quality service delivery and productivity. Procurement human resource when involved in the major organisational activities such as planning, budgeting and supplier consolidation have proved to decrease general organisational spending and enhanced ethical purchasing.

Therefore, organisations are forced to measure their performance to enable them take control measures of their activities and mitigate any problem that may rise in the supply chain process, (Nyanjala, 2016). Kwai (2005), looks at procurement function performance as cost minimization, customers satisfaction, timely deliveries and quality service provisions. High profit levels and quality services are realized when systems are in place to manage the supply chain components. According to Adeyemi & Salami (2010), achievements of an organization can be confirmed by comparing its operations with their set guiding principles and regulations. These standards are; effectiveness, efficiency, minimal wastage of resources and compliance to regulations. Amount of funds saved, efficiency and effectiveness of the procurement process can be used as criteria to measure procurement performance, (Wahu, Namusonge, Mungai and Ogol, 2015). Mwanjumwa and Simba (2015) posited that, supply chain performance requires to be established based on financial implications, and willingness of those who provide supplies accepting to follow procedures in resources acquisition. Sharing information with suppliers and supporting them through training and prompt payment so as to improve performance is vital for high supply chain performance.

## 1. 2 Statement of the Research Problem

According to Were (2019) among the key challenges of county government include the devolution of corruption, poor fiscal accountability by County Government and deterioration in business environment. In many counties a key problem with devolution has been the notably weak county fiscal performance, most counties are not implementing the supply chain management practices. A report by

the International Budget Partnership (IBP) shows that average transparency, as determined by the availability of key fiscal and budget related documents were 42 percent in September 2018. Only two out of fifteen counties assorted were compliant (Were 2019). Were (2019) states that the National Ethics and Anti-Corruption conducted a survey, in 2017 which showed significant percentage, 43.6% have a view that the county chiefs do not show an effort in overcoming graft and ensuring ethics are upheld by their staffs. This in turn has led to misuse of resources intended for development programs. The issues of supply chain management practices have been given much attention by scholars from all walks of life across the globe. A study by Abdallah, Ayman & Obeidat, Bader & Aqqad, Noor (2014) found out that customer inclusion and involvement, and deferment but not involvement of providers of supplies and making information available affects procurement effectiveness and performance. Tatoglu, Bayraktar, Golgeci, Koh, Demirbag & Zaim (2016) conducted a study that sought to establish how procurement communication strategies affect organization activities in small and medium enterprises. The study only focused on Turkish and Bulgarian manufacturing SMEs whose finding may not be of much aid to similar industries and governments in Kenya.

From the above empirical researches it can be concluded that not much studies have been done on procurement function performance, making this study useful by providing solution and direction. The selection of study area at hand was motivated by many challenges characterized by procurement process and department especially the devolved systems. The study focused on procurement planning, buyer- supplier relationship, and information sharing, supplier selection and moderating effect of government policy on procurement function performance.

## 1.3 Research Objectives

### 1.3.1 General Objective

Generally, the study was to established the effect of supply chain management practices, government policy and procurement function performance in Kakamega County, Kenya.

### 1.3.2 Specific Objectives

The specific objectives of the study were:

(i) To establish the effect of Procurement Planning on procurement function performance in Kakamega County, Kenya.

(ii) To determine effect of supplier selection on procurement function performance in Kakamega County, Kenya.

(iii) To assess effect of buyer-supplier relationship on procurement function performance in Kakamega County, Kenya.

(iv) To find out effect of information sharing on procurement function performance in Kakamega County, Kenya.

(v) To determine the moderating effect of government policy on the relationship between supply chain management practices and procurement function performance in Kakamega County, Kenya.

## 1.4 Research Hypotheses

The study was guided by the following hypotheses:

(vi) **$Ho_1$**- Procurement Planning has no significant effect on procurement function performance in Kakamega County, Kenya.

(vii) **$Ho_2$**- Supplier selection has no significant effect on procurement function performance in Kakamega County, Kenya.

(viii) **$Ho_3$**- Buyer-supplier relationship has no significant effect on procurement function performance in Kakamega County, Kenya.

(ix) $Ho_5$-Government policy has no moderating effect on the relationship between supply chain management practices and procurement function performance in Kakamega County, Kenya.

## 1.5 Scope of the study

The study established the effect of supply chain management practices, government policy and procurement function performance in Kakamega County, Kenya. The study variables include independent variable; procurement planning, supplier selection, buyer supplier relationship and information sharing, dependent variable procurement function performance and a moderating variable of government policy. The study targeted procurement officers and stores officers in Kakamega County. The research study was done in the year of 2022 and 2023.

## 1.6 Significance of the Study

According to Ireland and Huskisson, (2007), organizations encounter challenges when trying to gain competitive advantage against their competitors. It is more challenging to get knowledge on the best strategy to employ due to competitive nature of the operating industry. The data obtained from the study on the effect of Supply Chain Management Practices, government policy and procurement function performance in Kakamega County, will be helpful to both private and public entities.

This study would benefit the following groups:

The study will aid County Governments in Kenya to identify supply chain daily operations influences its operations. This will further help them in implementing the best supply chain management practice for better results. Non-governmental organizations and private sectors will also gain from the findings of the study which will enlighten them to accept and implement such practices which in turn would lead to business advantage and avoid being in conflict with the state laws.

The study will assist the National Government to come up with policies which will ensure best practices and proper management as well as utilization of resources. The research outcomes will be a good basis for the policy formulation. This will help donors to make informed decisions before financing county governments. It will help identify gaps which create loopholes for mismanagement of funds projected

to the County Governments. Scholars will benefit by using this study as reference point while carrying out their research on a similar area of study or field. This will enable them identify the knowledge gap as far as supply chain management practices are concerned.

### 1.7 Limitations of the study

The study focused on the county government specifically in Kakamega County which is basically a service industry. There are other institutions and other County Governments apart from the Kakamega County. Otherwise the findings may not be applicable to other entities which are not in service industry like manufacturing.

The study majored its focus on the supply chain management practices specifically on Procurement Planning, Supplier Selection, Buyer-Supplier Relationship and Information Sharing. This is not exhaustive and therefore more supply chain practices need to be studied like logistics and inventory management. The methodology applied in this study is cross-sectional research design. Other research designs can be used.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

The researcher reviewed the literature of previous scholars that are based on the study variable locally, regionally and globally, review of theories and the conceptual framework that establishes the link betwixt dependent variables, moderating variable and independent variables.

## 2.2 Theoretical Review

In order to explicate, prognosticate and fathom occurrences, theories are formulated and in other cases where problem arises, the knowledge gained from theories become a vital boundary bounding assumption, (Swanson, 2013). The application of theories helps explain the problem in a research, (Gabriel, 2013). The theoretical review focused on the contributions of the Network perspective theory, principal-agent theory and the Systems theory in explaining the relationship that exist in the SCMPS and performance of procurement function.

### 2.2.1 Network perspective Theory

The theory illustrates the relationships and explains all the interlinks available that facilitates connections in the supply chain. The theory was first propounded by Swiss mathematician called Leonhard Euler in the year 1707-1783. The theory is relevant to the study as it explains the connection among the parties in the organization. Chicksand, Watson, Walker, Radnor and Johnston, (2012), observed that inorder to come up with a long term relationship in the chain of supply firms the agenda should be how to network the suppliers.

For firms to remain competitive in a 21$^{st}$ century business environment and achieve single enterprise objectives, it must link with other firms. Coordination of duties along the chain of supply is vital inorder to meet the more specific ever increasing demand of customers which in the long run will lower costs

and enhance provision of services. Theory by Smith Jason, states that “Informal inter-organizational relationships flow through people: director interlocks, employee mobility, social networks that cross organizational boundaries”.

The limitation of this theory is that it does not put into account important aspects like completion or uncertainty which impacts institution’s productivity. Network theory is not employed in all the variables and study since not all supply chain practices have a network kind of relationship like procurement planning however still provides a vital platform in explaining the problem under study.
According to Ullah, (2012), the theory presumes that efficiency and effectiveness of firms is as a result of competitive advantage enjoyed from a networked supply chain. The theory postulates that in a network relationship sharing information is enabled betwixt buyers and sellers to have ingress to riches and ideas above their capabilities thus building trust based connections. Customer relationships are a network whereby no one of the stakeholders of the supply chain can survive without the other. This theory was relevant to this study since partnerships and buyer –supplier relationships forms part of organization networking which in turn facilitates organization performance.

### 2.2.2 Systems Theory

Systems theory first propounded by Ludwig von Bertalanffy in 1940s and later advanced by Ashby Ross in the establishment of Cybernetics in 1956. Ludwig von Bertalanffy was trying to bring back the concept of science unity where he accentuated that an ideal system is unbolted and freely interact with the surrounding and thus get new effects that ends up to continual change. The system theory assembles together different elements complex in the chain of supply that structures the subsystem which results to a larger chain of supply. These may include elements like human, capital, information, both financial and non-financial resources essential in connection. Chicksand et al, (2012 reiterated that inorder to understand procurement function outcomes, the theory is employed to give understanding on how both micro and macro factors structure the organization system.

However, the theory could not be applied in all the variables under the study like information sharing. The limitations of this theory are that the theory is of no use to tiny organizations since the theory assumes that most of the entities are big, complex and unbolted systems. It employs scientific approach which makes it more complex to be easily understood. The importance of the theory is acknowledged in the study since procurement is a system made of several sub-systems which are inter-dependent. The theory assisted in understanding the inter-relatedness of these systems within the supply chain.

### 2.2.3 Principal- Agent Theory

The genesis of the theory is with Donahue (1989), which explains the relationship role of supply chain managers. Under a contractual engagement, principal (public entity) engages the agent either one or more persons to undertake a task on their behalf, (Eyaa et al 2011). According to Emaya (2013) Supply chain managers are agents for the government. The agent performs that task assigned by the boss (principal), (Health & Normah, 2004). The Principal Agent Theory is grounded on the agent understanding the objectives of the principal and work to meet his/her expectation. The interest must be right if the objective is to be realized.

The assumptions and the propositions of PAT perfectly fits this study about supply chain management practices, government policy and performance of procurement function. The government (principal) formulates policies and delegates the supply chain managers to implement and ensure adherence to the stipulated policies. Because of this factor, supply chain managers are mandated to make steps in line with the interest of the government(principal) while performing the procurement cycle.

The aspect of relationship between principal and agent is vital for performance. In case of a poor relationship between principal and agent, the performance of procurement function would be affected. Principal agent theory provides a way where supply chain managers carry activities on behalf of the government where when good relation exists compliance is seen. The theory provided a good

framework that helped investigate whether the supply chain managers perform duties compliant to the government policies set in the procurement activities.

## 2.3 Review of Variables

Variable is a word regularly used in research studies. The variables are majorly categorized in independent, moderating and dependent variables. Independent variable precedes the dependent hence the former influences the latter, (Kaur, 2013). This study did a review on procurement planning, selection of supplier, relationship of buyer-supplier and sharing of information on performance of procurement function as moderated by Government policy.

### 2.3.1 Procurement planning

According to Zambia Public Procurement Authority, (2008) planning in acquisition is a process of recognizing needs and putting measures on assembling resources and setting timelines for the accomplishment. The importance of planning in procurement cannot be neglected in an entity since it facilitates the buying process and further enables get economies of scale and reduction of contingency buying. Workload in procurement of commodities is shared among parties in a firm when proper panning of procurement is conducted. According to PPOA Guide, (2014), the boss in procuring entity approves yearly the consolidated plans of procurement

According to Brown and Hyer (2010), these arrangements in procurement entails singling out the purpose, definition of scope, needs required by customers and pointing out the procurement activities, time and schedules that are involved. Ogubala and Kiarie (2014) opined that lack of required expertise for procurement staff, absence of top management support and inadequate budget have an effect on procurement planning which in turn affects performance. The study suggested further studies can be conducted in different counties to advance the findings.

### 2.3.2 Supplier selection

Institutions are becoming more and more dependent on suppliers which makes suppliers an important resource to the organisation since they greatly impact performance, (Lao, Hong & Rao, 2010). Supplier selection is a vigorous process of picking a supplier from many because of the outstanding qualities of commitment, experience, quality performance and capabilities possessed, (Gordon, 2008). A study by Gonzalez & Quesada (2004) discovered that supplier section impacted supply chain process in attaining the set quality levels. A research done by Manyega & Okibo (2015) in establishing is procurement performance is affected by supplier selection in public discovered that for a competitive firm's outcome in procurement function supplier selection must be effective.

A study by Thambane (2014), observed that selecting qualified, experienced, compliant suppliers was a major step in achieving desired levels of quality. Quality of supplies is directly interconnected to supplier selection. This typically means that when good supplier selection is done a supplier is expected to be committed, financially capable, deliver on time, work within budgeted coat and achieve efficiency and effectiveness in his process. It ensures that specifications as well as desired standards of quality are achieved, (Rono, 2017). Gurang and Phipon (2017) used grey based approach decision making in supplier selection and found out that supplier selection if vital process in decision making in a firm. Further studies were recommended to address the issue of supplier selection. Procurement function results in an entity is traced to effective supplier selection process (Krop and Iravo, 2016, Moses & Iravo 2018). The study was carried out in a public University. The present research tried to find out the effect supplier choice process on the procurement function performance in Kakamega County.

### 2.3.3 Buyer- supplier relationship

Buyer –supplier relationship results into timely deliveries, reducing costs associated with stock holding. Firms are enabled to engage their business associates on critical issues which is beneficial to all stake holders(Chin-Chun,2008). Uyarra and Flanagan (2010) partnership with suppliers enables greater

access to crucial information which might not be available in normal relationships. The information guide firms on decision making especially when coming up with specifications.

Apart from technology good relationship with suppliers which will lead to Business partnerships. This results to efficiency (Waithaka and Waiganjo, 2015). Morsy (2017) collected their data using individual interviews and analysed it using coding and cross case analysis techniques. This study used structured questionnaires and SPSS V20 to analyse data. A collaboration of buyers with suppliers aims at ensuring security of supplies, reduction of costs and quality. Chin-chun (2008) affirms this by suggesting that the engagement of buyer-supplier ensures activities are mutually beneficial to all parties

### 2.3.4 Information sharing

Inorder to sustain oneself in today's techno-business environment, adaptation of communication technology is vital to facilitate sharing of information across the chain of supply. It has grown to basic in firms to establish on effective and efficient way of sharing information because of globalization and advancement of technology which in the short-long run improvement of company outcomes. Simatupang & Sridharan (2002), defines information sharing as entrance to one's own data between business parties which goes in a long way to be a scanner of companies' products and orders as it goes down the chain of supply.

An empirical Study done by Baihaqi & Sohal (2013), to ascertain if organizational performance is impacted by information sharing in supply chain, found out that organizational outcomes is not impacted by sharing information in the chain of supply. Further suggested sharing information is vital not significant in enhancing organizational results. Rono (2017) sharing information in that chain of supply gives rise to a stronger synergy resulting into firms realizing greater levels of productivity hence competitive advantage. These are hard to realize without information access. Information sharing is vital to organizational competitiveness in manufacturing firms (Omari,2009). This study focuses on county government and procurement function performance for comparison of results. According to

Baihaqi and Sohal (2013) sharing information does not have an influence on organizational performance. Scholars gave contrasting results. This study sought to find out if similar results are achieved.

### 2.3.5 Government policies

Policies on purchasing greatly contribute to milestones in firm performance. They lead to increased supplier base enabling healthy competition, high profits as well as better business relationships (Sollish and Semanik, 2018). Due to pivotal importance of procurement department the government has laid down policies and procedures to guide the procurement functions in various institutions. Lukacs (2011) opined that a country that has implemented public polices encourages growth and formalization. Despite the government efforts to formulate polices in county government the outcome has not been promising, (Moronge & Mbugua 2016).

According to Mwinyi (2012), government policies influence performance of marketing firms in Kenya. Public policy enables a firm to make demand driven decisions. This gives it a competitive edge over competitors (Morash and Lynch, 2002). Birkland, (2016) there is an extent to which policy makers may not discuss some issues in the public domain. Policies are divided into first and second layers. The first layer consists of items which policy makers are not ready to discuss openly while layer two are open to public participation.

### 2.3.6 Procurement function performance

Performance is the ability to achieve targeted objective through coordination of other committed parties. According to Rotich, Muma and Micheni (2016) procurement performance concept subsisted since early 1930s. procurement function performance is a continuing, never-ending non-segregated process that regularly need reforms and assessments, (Osoro and Musau, 2018). For any institution to perform, supply chain need to be effective in every activity.

According to Abonyo (2017) factors such as information technology training and development, human resource capacity influence procurement function performance. However, there other factors that contribute to procurement function performance. The study sought to establish the effects of planning in procurement, choices made in suppliers and supplier- buyer relation and their contribution to procurement function performance.

## 2.4 Empirical Review

The section looked at the previous studies carried out by other scholars on similar or related subjects. This tried to find out the study gaps from those previous studies.

### 2.4.1 Effect Procurement planning practice on procurement function performance.

Planning in procurement is an obligatory requirement by law in section 26(3), regulation 2021 which is released yearly stating all the activities to be carried out in the following year. This enables entities to amass needs to large tenders which comes with benefits of economies of scale and prevention of emergencies. According to PPOA Guide, (2014), the boss in procuring entity approves yearly the consolidated plans of procurement

According to Brown and Hyer (2010), these arrangements in procurement entails singling out the purpose, definition of scope, needs required by customers and pointing out the procurement activities, time and schedules that are involved. Ogubala and Kiarie (2014) opined that lack of required expertise for procurement staff, absence of top management support and inadequate budget have an effect on procurement planning which in turn affects procurement function performance. The study suggested further studies can be conducted in different counties to advance the findings.

Observations made by Basheka, (2008), planning is an exercise carried out in phases pointing out activities perturbed with decisions of the very day not future doings. Study added that ministries draw up plans of annual procurement activities which is done in a transdisciplinary way. Procurement plans

help in drafting years' financial estimates which goes a long way to help efficient resource use and enhance public procurement performance.

A study by Metobo, (2016), to establish how corporation in Kenya service delivery is influenced by practices in procurement observed that procurement planning and procurement performance are interconnected and inclusion of portfolios of procurement and management of logistics enhances public institutions procurement performance.

A study was carried out by Kibet and Njeru, (2014) on effect of procurement planning on procurement performance. A case study of Agricultural Development Corporation, Nairobi and observed that planning of procurement and procurement performance are interconnected and inclusion of portfolios of procurement, management of logistics enhances public institutions procurement performance. The purpose of procurement planning therefore is to utilize the available resources to achieve the overall procurement objectives.

A study was conducted by Salim &Kitheka, (2019) to establish if procurement performance is influenced by planning in procurement in Mombasa county state corporations. With a descriptive research design and stratified random sampling techniques, that study found out that procurement performance is significantly influenced by plans/budgets. Studies indicate that planning alone is not enough to enjoy the results, rather effective implementation results to achievement of value for money, perfect allocation of resources and efficiency of processes in an organisation

In Kericho county, a study was conducted by Chepngetich (2018) to determine the interconnectedness of planning and delivery of services for county governments. Observations made was that a positive connection exists betwixt delivery of services, effective need evaluation and specification of cost. Few studies have been done to unearth the significance of planning in procurement and further other studies can be done in different counties to advance the findings.

### 2.4.2 Effect of Supplier selection on procurement function performance

Selection of suppliers form an integral part in management of supply chain. To achieve quality and minimize costs in firm, the choices made on vendors is critical. Linn, Tsung & Ellis (2006) posits that to evaluate quality and prices in an effective way is difficult due to unavailability of tools.

A research done by PWC and BCI, (2013) indicated that companies are disrupted in their supply chain at a percentage of 75. An expert opinion approach of selection of suppliers by Yigin, (2007) stated that companies face critical issues in the increasing emphasis on the management of risk in the selection of vendors. Past studies recommend different tools to be employed in selection of suppliers where strategies for risk prevention in the links of supply are not handled. Namdar, Li, Sawhney and Pradhan, (2018) affirmed by opining prior planning should be made on disruption support and deeper ideas sought for to enhance mastery in the interconnection between features in supply chain and flexibility. A study conducted by Su and Gargeya (2016) on the selection of suppliers in small and medium sized firms; in the case of US textile and apparel industry using a survey based design indicated that supplier selection criteria impacts significantly on performance. These criteria include; quality, supplier responsiveness and strategic considerations, (Su and Gargeya, 2016). Femiyeh and Kwarteng (2018) conducted a study in Ghana to establish the influence of supplier selection and firm performance; and established that performance is enhanced when suppliers are selected based on quality which leads to improved delivery time, reduced cost and firm's flexibility.

A study by Naibor and Moronge (2018) trying to determine if selection criteria of supplier's influence manufacturing company's performance, found out suppliers' financial status, technical capability, capacity and culture evaluation influences performance of manufacturing firms. The study majorly focused on the manufacturing firms and empirically modeled the relationship between the supplier's selection criteria and performance and failed to conceptualize how this supply chain practices affects procurement performance of firms.

In a survey research study done by Kariuki, Makokha and Namusonge (2018), in technical institutions in the county of trans-Nzoia on the influence of supplier selection on procurement performance, discovered that commitment of suppliers to offer quality enhanced performance of procurement and therefore should be taken into consideration when selecting suppliers. The study failed to comprehensively indicate how the supplier selection influence procurement performance and it was limited only on few variables in the practices of supply chain. Study only focused on technical colleges where the results may not be applicable to county governments which the current study seeks to research. The current study curbed the gab by assessing how the supplier selection affects the procurement function performance in Kakamega County.

### 2.4.3 Effect of Buyer- supplier relationship on procurement function performance

In his study on relational complexity, Healey, (2006) proposed a combined effort in planning by various parties which entails different partners, working in different line of work engrossed to discuss future progress. Healey (2006), noted that judicious dialogue of contracting opinions is preferably disclosed to incorporate fascinating gathering giving new planning talk permitting members to obtain knowledge. This gives an advantage to other members founding a basis for a combined effort to change the current performance. Prajogo and Olhager (2012) on his study posited that information technology and sharing significantly impacts logistic integration that had an effect on organization performance levels both directly and indirectly. Firms are enabled to engage their business associates on critical issues which is beneficial to all stake holders, (Chin-Chun,2008).

A study by Sundram, Chandran and Bhatti (2016), on trying to establish how performance is impacted by the practices of supply chain observed that supply chain outcome is mediated fully by amalgamation of supply chain with procedures of supply. According to the study the relationship existing among partners in supply chain, management of customer correlation, sharing information with parties in the link were to a certain degree moderated by integration of supply chain. There was a non-significant effect of risk and reward sharing. A study conducted by Wachuma & Shalle

(2006) found out that both supplier and ICT integration enhances organizational performance in children ministry. The study was done in the public ministry specifically in the labor sector and security sector. The current study is carried out in county governments specifically Kakamega county.

In Kenya, Watiri and Kihara, (2017) carried out a study to establish how organizations outsmart their competitors due to the deployment of practices of supply chain which showed that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors. EAPCC ability to outsmart its competitors and gain a wide market share is due to close relationships with customers. A company is able to differentiate its product from that of its competitors when close links exists with their customers.

A study conducted by Omondi (2015 discovered distributors in Kisumu had adopted the concept of relationship between buyers and suppliers. This concept of buyer-supplier relationship has enhanced performance of the organizations to a large extent. The study confined itself in large scale distributors in Kisumu thus not applicable to firms outside Kisumu and in Kenya. The challenges are unique to retail outlets in different geographical locations hence the results could not be ascertained. The study presents a contextual and conceptual gaps that the current study sought to fill.

### 2.4.4 Effect of Information Sharing on performance of procurement function.

Simatupang & Sridharan (2002), defines information sharing as entrance to one's own data between business parties which goes in a long way to be a scanner of companies' products and orders as it goes down the chain of supply. Quality transmission encompasses correctness, satisfactoriness, punctuality and dependability of information. Sanders & Premus (2005) reiterates that sharing information as a way of enabling the firm see the future enhances planning in procurement, management of stock and dispersal. Participation entails the degree parties collaboratively plan and set objectives.

A study conducted by Abdallah (2014), observed that efficiency of the outcome is due to the practices of supply chain embraced. These practices according to Abdallah (2014), are sharing of information, postponement and internal integration which along the way enhances level of output in supply chain. However, Baihaqi & Sohal (2013), conducted a study that established sharing information has no impact on the outcome in terms of performance of an organization. They further opined that information sharing is vital but not sufficient alone to boost the outcome. These studies pose observations that calls for re-examinations the current research established effect of information sharing has on performance of procurement function in Kakamega County.

A study by Ahlam and Hebah (2018), indicated that passing of information results to a number of benefits to manufacturing industries however, passing information accidentally to service providers can also injure organizations level of outcome. Competitors access to company's secret negatively injures performance. There is other information that can be passed down the supply chain like purchases and sales, prices, market development, production cost and changes made to products whereas other information's remains as company secrets, (pandey ,2010). Studies show that passing knowledge is a way of empowering individuals with (Klischewski and Scholl 2008; School 2000; Yang 2011; Nonaka&Takeuchi, 2007). As it is suggested, clear knowledge more perceivable and easier to pass and share, (Cress, 2006).

Inorder to survive worldwide competition, firms are required to relook at their strategies and come up with best ways of sharing knowledge related to business operations, (Zahra, 2013). Rosen (2007), opined that provision of computer accessories is not on its own enough. Partners should be willing to give access to open communications as far as business is concerned. In the current business world, business does not work in isolation, it is needful to involve other stakeholders, (Mourtzis, 2011). Cooperation and inclusivity in supply chain management have been for a long time a concern for researchers. For any firm to have an edge over their competitors and excel in its operations, information sharing is needful, (Zha& Ding, 2005).

Information sharing is dissemination of necessary knowledge required by an entity. There are some basic questions that are needful to ask as to achieve best results of sharing information. To start with one is required to know what to share, who should receive it, the best way of disseminating, and the timing. If such are well addressed it will ensure it becomes a cheaper affair, (Sun and Yen, 2005). Tsungu (2000) Denotes that making information available can be the same as sharing knowledge. Countless information exists in the supply chain where technology addresses it, enabling passing of information more real and practical. Scholars have conducted studies on the effects of information sharing and its contribution to organisational survival. It is not yet very clear on the benefits accrued from sharing of the knowledge, (Tsungu,2000).

Fiala (2005), modelling on information technology and internet structure can lead to establishment of cordial partnership among stakeholders. This in turn ensures profits are achievable. As more knowledge is shared suspicion is eliminated leading to supplies of the first class meeting lead times. Min (2005), further added that knowledge sharing should be made a priority in the supply chain. When two or more stakeholders come together in a chosen relationship, they form a partnership. This in turn reduces costs of supplies.

It is not all the knowledge that should be made available to all stakeholders. Basic business ideas is to be open to all the supply chain partners where basic information to be shared will include sales data, order information, product performance information, inventory and sale forecast information, new products; and any other relevant Information. By Sharing information, the partners avoid depleting of stores reserves and buying the same orders by duplication. Holding of stock which is costly affair can be eliminated through accurate projections of requirements exact demand by customers reducing excesses, (Zahra et al,2013).

According to Zahra 2013), partners in supply chain make un influenced projections and by sharing knowledge and business ideas gives competitive hedge to such partnerships. Hurdles that otherwise could hinder performance are eliminated enabling customer satisfaction. Movement of product

knowledge aid in elimination of shortages avoiding consequences related to it. New product ideas and knowledge can be made available for deliveries that meet the lead times thus ensuring customer demand are met satisfactorily.

Members in the supply chain can gain relevant knowledge concerning themselves which might not be the case on knowing one another. This comes due to insufficient communication of the other stakeholders. These challenges can be overcome if supply chain partners can openly share knowledge with their colleagues, (Li & Gao,2011). The bullwhip effect can result where basic business knowledge is not made available to all the concerned parties. The movement of basic business knowledge and ideas among the partners leads to a pool where uncertainties are put to a minimum overcoming adverse effect caused by bullwhip effect (Fiala,2005; Zoe & Whang, 2004, Li & Gao,2011 &Jauhari,2009).

Knowledge sharing along the network improves relationships among the partners which in turn ensures speedy process, (Mourtzis ,2011). Marshall and Bly (2004), close connection is ensured when partners freely communicate to other. Yang and Maxwell, (2011) well-being of an organisation and its efficiency are some of benefits of information sharing. However, a study carried out by Khalil, Khan & Rashid (2018), showed close relationship with partners and suppliers, extend of knowledge sharing does not affect organisation level of outcome. The study was limited to smaller sample size and used innovations as moderating variable. Despite of these studies conducted, they gave a mixed result that was re-examined by the current study.

According to Zhao, (2002), Khurana, (2011) difficulties are likely to occur when sharing knowledge with other partners. Keeping secret confidential information is of a great concern not forgetting the cost implication of channelling such knowledge. Most supply chain partners have concerns on the privacy of shared business ideas to the public and among stakeholders, (Razavi& Iverson,2006). Cetindamar (2005), suggests that there should be in existence a reliable channel where partners can freely share and access knowledge. Supply chain partners may not have confidence toward one another hindering free communication, (Kim & Lee,2006). Favourable technology innovations can lead to effective sharing

of business ideas. Yang and Maxwell, (2011) failure to have systems which are acceptable by all lead to reduced sharing of business knowledge.

### 2.4.5 Moderating effect of Government policies on Supply chain management procurement function performance in Kakamega county, Kenya

Primary and most basic goal of procurement in public entities is to deliver commodities necessary to enable accomplishment of government mission in a timely, economical and efficient way (OECD 2017). The public procurement activities are funded using the tax payer's money which makes it a vital domain that must be done efficiently and to a higher level in order to safe guard the public interest. The importance of procurement function in government cannot be underrated. According OECD (2017), procurement constitutes the life blood of government activities. For instance, health system where its expenditure amounts to 30% in OECD countries depends on procurement for medicine products and services, (OECD 2019).

Due to pivotal importance of procurement function the government has laid down policies and procedures to guide the procurement function in various institutions. Lukacs (2011) opined that a country that has implemented public polices encourages growth and formalization. Public procurement activities in Kenya is based on the PPADA 2015 that provides roadmap on how activities are to be performed in the procurement. PPADA 2015 Act provides a standardized framework for the procurement activities in all public sectors which should be appreciated in all procurement operations. Despite the government efforts to formulate polices in county government the outcome has not been promising, (Moronge & Mbugua 2016). Zhu (2011), found out that barriers to the implementation of polices in China Government were related to finance and quality laws. Many citizens perceive that procurement function in counties as being corrupt and the one that waste resources and tampers with quality of goods and services delivered. With government interventions, more polices have been formulated in order to turn things round and win public confidence. Failure to implement the

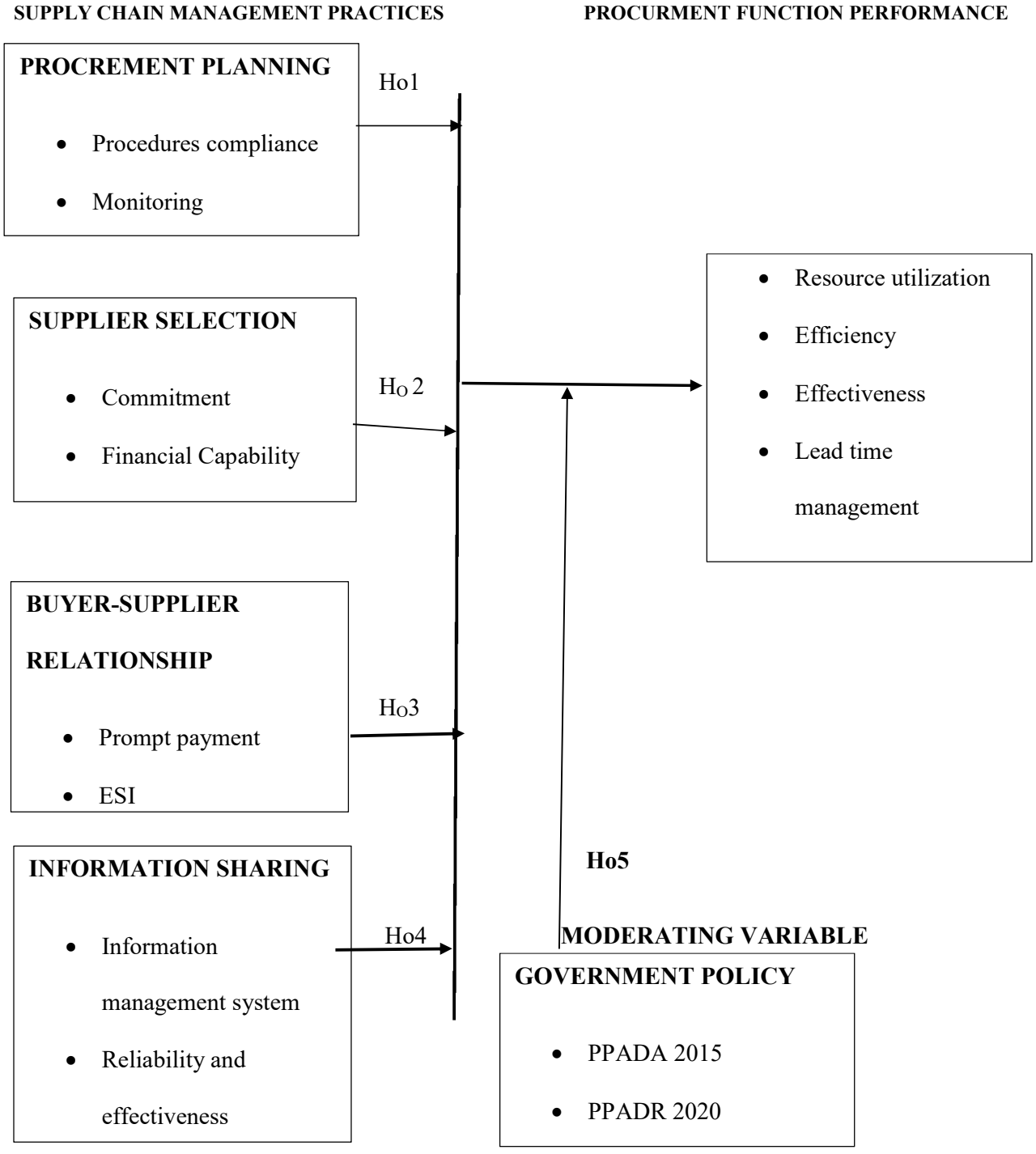
recommended set standards huge cost are incurred in operations, poor quality of goods and services and long lead times.

Practices in the chain of supply highly contribute to the outcome of procurement function in county government. A strong link exists connecting practices of supply chain management, efficiency, effectiveness and resource utilization, (Weelle 2006). Angella (2014) opined that lack of strategic plan and poor implementation procedures results to poor procurement functions performance. National public procurement integrity baseline survey (2009) observed that failure to implement government policies in in counties resulted to embezzlement of public funds in Kenya.

A circular by PPRA (2021), stipulates that before supplier selection all the set standard requirements are met. This is provided so that the procurement practice is conducted in systematic manner which is fair and competitive. These polices when fully complied with will enhance efficiency and effectiveness transparency and resource utilization in county governments.

### 2.5 Conceptual Framework

A conceptual framework is understood by Theuri (2015), as to conceptualize the relationship that exists between variables under study. This is the researcher's own view of the problem or issue under the study which gave direction to the study. In the current study, the researcher investigated the effects of supply chain management practices, government policy and procurement function performance in Kakamega county. Research took into account four independent variables, namely; procurement planning, supplier selection, buyer-supplier relationship and information sharing. The dependent variable was procurement function performance. The independent and dependent variables were moderated by government policies.




**Source**: Researcher's own conceptualization (2019)

**Figure 1.0** Conceptual Framework showing interaction of study variables

## 2.6 Summary of Literature Review

Three theories were reviewed; network perspective theory, system theory and principal agent theory. The theories gave an understanding on how the variables related and coordinated the environment. The network perspective theory presupposes that institutions depend on the connection directly linked to the firm and other external links of firms in the supply chain. Ullah, (2012), posits the theory presumes that efficiency and effectiveness of firms is as a result of competitive advantage enjoyed from a networked supply chain. The theory postulates that in a network relationship sharing information is enabled betwixt buyers and sellers to have ingress to riches and ideas above their capabilities thus building trust based connections. Customer relationships are a network whereby no one of the stakeholders of the supply chain can survive without the other.

On the other hand, the system theory assembles together different elements complex in the chain of supply that structures the subsystem which results to a larger chain of supply. These may include elements like human, capital, information, both financial and non-financial resources essential in connection. Chicksand et al, (2012 reiterated that inorder to understand procurement function outcomes, the theory is employed to give understanding on how both micro and macro factors structure the organization system.

In a principal-agent theory, principal engages the agent either one or more persons to undertake a task on their behalf, (Eyaa et al 2011). According to Emaya (2013) Supply chain managers are agents for the government. The agent performs that task assigned by the boss (principal), (Health & Normah, 2004). The Principal Agent Theory is grounded on the agent understanding the objectives of the principal and work to meet his/her expectation. The interest must be right for the objective is to be realized. The assumptions and the propositions of PAT perfectly fits this study about procurement function performance and supply chain practices. The government (principal) formulates policies and delegates the supply chain managers to implement and ensure adherence to the stipulated policies.

Because of this factor, supply chain managers are mandated to make steps in line with the interests of the government(principal) while performing the procurement activities.

The conceptual framework gave understanding on the relationship that exist betwixt the independent variable, dependent variable and the variables moderating the relationship. The literature reviewed the variables namely; procurement planning, supplier selection, buyer-supplier relationship and information sharing, (independent variable), government policy, (moderating variable) and procurement function performance (dependent variable)

### 2.7 Research Gap

| TITLE/AUTHOR | FINDINGS | COUNTRY | KNOWLEDGE GAPS |
|---|---|---|---|
| "Supply chain practices & organizational performance: An empirical investigation of Indian manufacturing organizations",(Gorane&Kant,2017) | Implementation of procurement practices enhances performance in organizations. Customer satisfactions and successful financial performance is as a result of implementation of SCMPs. | INDIA | The study did exhaust all the practices of supply chain. Research majorly focused on manufacturing industry. An extension to specific sectors can help refine the findings. The current study examined county governments. The study was done in India. The current study was done in Kenya specifically in Kakamega county. This presents a conceptual gap. |
| Selection of tailored practices for supply chain management ( Barros, Barbosa Póvoa, and Blanco, 2013) | inimical to management of supply chain are misspend, unpredictability, overcrowding, bullwhip and self-serving. | Portugal | The study was conducted in Portugal and a case study design was adopted. These presents a conceptual and methodological gaps. The current study examined practices of supply chain management in county governments. The present study is done in Kenya and adopted descriptive design. |
| Supply chain practices and performance: the indirect effects of supply chain integration (Veera | Performance in procurement is as a result of integration in supply chain. | Malaysia | The research used only a lately evolved frame to assess the web connecting various elements practices in chain of supply and the unification of supply chain. in the electronics sector. A survey design |

| | | | |
|---|---|---|---|
| Sundram, Bhatti, 2016) | | | and was conducted in Malaysian electronic sector. These presents conceptual, methodological and contextual gaps. The study used a unification of supply chain as a moderator. The present study used government policy as a moderator. The current study examined county governments of Kakamega in Kenya. |
| Supply Chain Management and Operational Performance in Nigeria: A Panel Regression Model Approach (Shobayo2017) | The study established that Supply operational performance is not affected by the supply procurement practices. | Nigeria | The Research focused on operational performance using Regression model. The study was done in Nigeria and used descriptive research design of ex post factor type. The study used second-party data. These presents a methodological and conceptual gaps. The present study first-hand data and design used was descriptive. |
| The influence of supply chain management practices on competitive advantage in cement manufacturing industry: a case of east African Portland cement company limited (Watiri&Kihara, 2017) | The study found that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors. | Kenya | The research focused only in manufacturing industry which may not be clear of all the players in the economy. The present study focused on the public sector. |
| The effects of supply chain management practices on competitive advantage and organizational performance. A case study of Uganda crown beverages.( Mutangana 2019). | Organizational levels of performance and its ability to outsmart competitors is highly as a result of deployment of practices in supply chain management. | Uganda | The study was done in Uganda and the design used was cross-sectional survey. The presents methodological and conceptual gaps. The present study was done in Kenya and descriptive research design was deployed. |
| Supply chain management practices and performance of cement companies in Kenya. ( Mahulo, 2015) | Performance of companies are influenced positively by the procurement practices adopted by the firms. | Kenya | Research was guided by collaborative, purchasing and manufacturing strategy theories and a cross-sectional research design adopted. These presents a methodological and theoretical gaps. The present study was guided by network and system theories and used descriptive design. |

| | | | |
|---|---|---|---|
| | | | The current study was done in public sector, service industry. |
| Perceived buyer-supplier relationships and performance among large scale retail outlets in Kisumu, Kenya. (Omondi, 2015) | Most organizations have incorporated the concept of buyer supplier relationships which has positively enhanced their supply chain performance. | Kenya | The study was done in a large scale retail firms and was guided and used cross sectional survey design. These presents a methodological gap. The current study was done in a public organization specially Kakamega county and used descriptive design. |
| The effect of lean supply chain management practices on organizational performance in government ministries in Kenya.( Wachuma & Shalle, 2016) | Both supplier and ICT integration enhances organizational performance in children ministry. | Kenya | The study was done in the public sector specifically in the ministry of labor, social security and services. The current study is done in county governments specifically Kakamega County. |

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.0 Introduction

This chapter outlays the procedure followed in study. Thus, introduces and illustrates the design, target participants, sample size and techniques in sampling, collection instrument, validity and reliability, data collection procedure, data analysis and presentation.

## 3.1 Research Design

Cross-sectional research design was used in the present study. It is significance since it used where the purpose of the study is descriptive usually a survey, (kate, 2006). It can estimate preference of outcome of interest because the sample is usually from whole population. Research designs provides a glue that binds a research project together, (Venkatesh, and Bala, 2013). The researcher obtained opinion of people about the problem at hand which formed the basis of the study.

## 3.2 Target population

These are the research participants that gives answers to the study questions. The target respondents for this study were the procurement officers and stores officers in Kakamega county. This formed a total of 35 respondents. The researcher targeted the group because they are involved in functions of procurement in the county of Kakamega.

## 3.3 Sampling and Sample

The target population of 35 respondents formed the sample size. The 35 respondents were identified using census method. Table 3.1 shows the sampling frame in which 35 respondents have been presented.

**Table 3.1 Sampling frame**

| Department | Target |
|---|---|
| Supply chain | 31 |
| Stores | 4 |
| **Total** | **35** |

**Source**: Human Resource Management of Kakamega County Government

### 3.4 Instruments of Data Collection

Questionnaires were used to gather data because they are easy to administer and validity of information was needed. Data collection was done through self- administering of structured questionnaires. Collection of data was done by taking questionnaires to participants and picking later when completed. The respondents were notified of the time frame for the collection of their responses. The questionnaires contained one that encompassed questions on Procurement Planning, Supplier Selection, Buyer Supplier Relationship, Information Sharing, Government Policy and the Procurement Function Performance. It was after the gathering of the data that compilation and analysis will be done.

### 3.5 Reliability of research instrument

Reliability is about consistency of results by data instruments. The researcher used test re-tests method by Mugenda and Mugenda (2010) to arrive at reliability whereby responses provided were checked to establish similarity. Questions were administered to individuals with similar characteristics as the actual sample. The test was repeated after two months and the scores from the outcomes were correlated to obtain the reliability coefficient.

### 3.6 Piloting Study

A pilot study is one of essential stages in research project. Hassan, Schattner and Mazza (2006) carried a study on a pilot study and established that its necessary and essential in giving a basis for project studies. Success main study is not as a result of a pilot study but can foretell expectations and likelihood

of achievement, (Taijlingen and Vanora, 2002). Pilot test is conducted to detect weaknesses in design and instrumentation to provide relevant data for selection of a probability sample (Cooper and Schindler, 2010). Pilot study targeted 13 respondents in the procurement department. The respondents in the prior examination did not participate in the main project at hand to evaluate the questionnaires for the flow of questions, accuracy, readability and understandability of the research instruments used in the study (McMillan & Schumacher, 2014). The study pilot was conducted in Nyamira county Government which has the same structures as those of Kakamega County in procurement.

### 3.6 Validity of research instrument

Validity is the correctness and relevance of deductions from study results. According to Mugenda (2013), Validity is the capability of a test to compute what is expected to compute. Validity dealt with procedures used to arrive at a correctly constructed data collection instrument. The supervisor approved the accuracy of the questionnaire and the researcher was guided by research objectives. According to Mugenda and Mugenda (2010) the best way of assessing content validity is by use of expert in a particular field which assists the researcher to get relevant guidance before actual study for the best quality of the study. Validity of a study instrument is achieved by its ability to ask right questions which are well framed in order to avoid ambiguity. This sought opinions of experts in Supply chain, especially lecturers to determine the validity of the instruments used in the study. The opinions ensured necessary modifications for better and accurate results. This was done by the supervisors at MMUST by examining the research questionnaires in ascertaining their relevance to the study and respondents.

### 3.7 Data Collection procedure

Before proceeding to the gathering of data, the scholar acquired an introductory letter from the School of Graduate Studies (SGS) of Masinde Muliro University of Science and Technology (MMUST), then visited the Director of Procurement Department at the County Government of Kakamega to deliver the

transmittal letter seeking authority to gather data for reasons well known, academics. A permit from NACOSTI was sought then own-self administration of questionnaires was done.

**3.8 Data analysis and presentation**

According to Jwan and Ong'ndo, (2011) examination of data is a series of process that begins from planning, gathering to reporting in a manner that is understandable and available to other scholars. Data collected was arranged in a way that it could facilitate interpretation and investigation into meaningful data which was deducted on the problems that initiated the study. The received questionnaires were checked for any errors to ensure completeness before the final verifications was done. Data analysis was by descriptive and inferential sstatistics. Statistical package for social sciences (SPSS V24) was used for scrutiny of the data gathered. Data was presented in tables. The relationship among study variables at 5% confidence level were fixed upon by the use of regression analysis as stated below.

$\gamma = \beta_0 + \beta_1 X_1 + \varepsilon$……..1

$\gamma = \beta_0 + \beta_2 X_2 + \varepsilon$…….2

$\gamma = \beta_0 + \beta_3 X_3 + \varepsilon$…….3

$\gamma = \beta_0 + \beta_4 X_4 + \varepsilon$…….4

$\gamma = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$……..5

Where;

Y =Dependent variable –supply chain Performance

$X_1$ =Independent variable 1-Procurement Planning

$X_2$ =Independent variable 2- Supplier Selection

$X_3$ =Independent variable 3- Buyer-Supplier Relationship

$X_4$ = Independent variable 4- Information Sharing

$\varepsilon$ =An error term random variation due to other unmeasured factors

$\beta_0$ =y-intercept/constant

$\beta_1$,$\beta_2$,$\beta_3$,$\beta_4$ =the slopes of the regression equation.

**Model 2**: Moderating effect of government policy on the relationship between procurement practices and the performance of supply chain in Kakamega County.

$$\gamma = \beta_0 + \beta_1 X_1 z + \beta_2 X_2 z + \beta_3 X_3 z + \beta_4 X_4 z + \varepsilon \text{.....6}$$

Where;

Z =Moderating effect of government policy

### 3.10 Ethical Considerations

According to Bryman and Bell (2007) ethical concerns in a research thesis entails the following; respect to the research participants, protection of participants so as not to be exposed to any harm, prior communication to participants concerning the study to be held, confidentiality to be prioritised and assurance of anonymity of participants, avoidance of falsehood and exaggeration of the study goals, any conflicting interest be declared and openness and truthfulness in communication be upheld. The stated ethical considerations were upheld by the researcher in these study.

### 3.9 Model of Regression Assumptions

Like any other models regression model has assumptions. These assumptions can lead to estimates may give unreliable outcomes due to biasness or inconsistence. The following were the assumptions related to the regression model under this study:

Multi-Collinearity-Data must not demonstrate multi-collinearity occurring in independent variables which are strongly interlinked to one another. According to Lucy (2018), multi-collinearity brings a challenge in understanding which independent variable leads to variance as it may be explained by the dependent variable. Calculating multiple regression model has a number of technical challenges.

Normality – data for multiple regression model must be distributed normally. All errors are normally distributed at zero.

Linearity – the results in independent and dependent variables are straight in character. Earns et al. (2017), linearity shows the level at which variation in independent variable is related to variation in the dependent variable.

# CHAPTER FOUR

# DATA ANALYSIS, FINDINGS AND DISCUSSIONS

## 4.1 Introduction

This chapter covers reliability test, response rate, descriptive analysis of variables and discussions.

### 4.2 Reliability tests

This is the consistency of a research instrument in measuring what its intended to. In an event where 0.70 and above Cronbach Alpha coefficient is considered reliable. The variables were analyzed the results are displayed in the table 4.2 below: -

**Table 4.1: Cronbach Alpha results**

| Variable | Cronbach Alpha |
|---|---|
| Procurement Planning | 0.831 |
| Supplier Selection | 0.742 |
| Buyer-Supplier Relationship | 0.709 |
| Information Sharing | 0.790 |
| Government Policy | 0.763 |
| Performance of Procurement Function | 0.819 |

**Field data (2022)**

### 4.3 Response Rate

In the study, questionnaires totaling to 35 were given to Kakamega County procurement and stores offices. 32 questionnaires were successfully completed by the respondents which showed a response rate of 91.4%. This response rate was considered excellent to make conclusions and recommendations for this study.

**Table 4. 2: Response rate**

| Response | f | % |
|---|---|---|
| Successful | 32 | 91.4% |
| Unsuccessful | 3 | 8.6% |
| Total | 35 | 100% |

**Field data (2022)**

According to Saunders et al. (2007), the response rate of at least 90% was considered an excellent rate.

### 4.4 Descriptive Analysis of the Variables in the Study

Descriptive analysis included an assessment of Procurement Planning, Supplier Selection, Buyer-Supplier Relationship, Information Sharing, Government Policy and procurement function performance. The statements were anchored on a five - point Likert-type scale ranging from 1=Strongly Disagree to 5= Strongly Agree and respondents were asked to indicate the extent to which they agreed to the statements.

#### 4.4.1 Procurement Planning

The following four statements were formulated to measure Procurement Planning and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.3: Procurement Planning**

| Procurement Planning | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|
| We have an active team that conducts procurement planning yearly. | 1(13.2%) | 0(0%) | 7(21.9%) | 8(25%) | 16(50%) | 4.1875 | 0.99798 |
| Our institution implements all the yearly plans as required. | 0(0%) | 1(3.1%) | 2(6.3%) | 16(50%) | 13(40.6%) | 4.2813 | 0.72887 |
| Through the procurement plans, we are able to monitor projects well | 1(3.1%) | 0(0%) | 3(9.1%) | 7(21.9%) | 21(65.5%) | 4.4688 | 0.91526 |
| Our institution estimates its yearly expenses. | 1(3.1%) | 0(0%) | 7(21.9%) | 11(34.4%) | 13(40.6%) | 4.0938 | 0.96250 |

**Source: Field 2022**

A huge proportion of the respondents (50%) were in agreement that they have an active team that conducts procurement planning yearly with a mean of (4.1875). A good number of the respondents (50%) agreed that Kakamega County implements all the yearly plans as required with a mean of

(4.2813). 65% of the respondent agreed that they are able to monitor their projects well through procurement planning with a mean of (4.4688). Concerning whether Kakamega county, estimates its yearly expenses, 40.6% were in agreement with a mean of (4.0938). study results corroborate with Metobo, (2016), who established how corporation in Kenya service delivery is influenced by practices in procurement observed that procurement planning and procurement performance are interconnected and inclusion of portfolios of procurement and management of logistics enhances public institutions procurement performance. Further Kibet and Njeru, (2015) observed that planning of procurement and procurement performance are interconnected and inclusion of portfolios of procurement, management of logistics enhances public institutions procurement performance. Likewise, Chepngetich (2018) Observed that a positive connection exists betwixt delivery of services, effective need evaluation and specification of cost Observations made was that a positive connection exists betwixt delivery of services, effective need evaluation and specification of cost.

### 4.4.2 Supplier Selection

The following six statements were formulated to measure Supplier Selection and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.4: Supplier Selection**

| Supplier Selection | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|
| We select suppliers who are reliable. | 0(0%) | 2(6.3%) | 12(37.5%) | 9(28.1%) | 8(25%) | 5.3438 | 9.10728 |
| Only suppliers who meet requirements are selected. | 1(3.1%) | 0(0%) | 3(9.4%) | 16(50%) | 12(37.5%) | 4.1875 | 0.85901 |
| All suppliers are given opportunity to bid | 1(3.1%) | 0(0%) | 3(9.4%) | 7(21.9%) | 21(65.6%) | 4.4688 | 0.91526 |
| Our institution | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| engages suppliers who are committed to provide quality services and works. | 0(0%) | 1(3.1%) | 3(9.4%) | 12(37.5%) | 16(50%) | 4.3438 | 0.78738 |
| During selection process we analyze the suppliers' financial capacity. | 0(0%) | 1(3.1%) | 2(6.3%) | 9(28.1%) | 20(62.5%) | 4.5000 | 0.76200 |
| Our institution have a clear supplier selection procedure. | 0(0%) | 0(0%) | 3(9.4%) | 19(59.4%) | 10(31.3%) | 4.2188 | 0.60824 |

**Source: Field 2022**

An average number (37.5%) of participants supported that county government of Kakamega selects suppliers who are reliable with a mean of (5.3438). 37.5% of the respondents were in agreement that only suppliers who meet the requirements are selected with a mean of (4.1875). On whether all suppliers are given opportunity to bid, 65.6% were in agreement with a mean of (4.4688). On whether Kakamega County engages suppliers who are committed to provide quality services and works, 50% were in agreement with a mean of (4.3438). A good number 62.5% agreed that during selection process the institution analyzes suppliers' financial capacity with a mean of (4.5000). In regards to whether the institution have a clear supplier selection procedure, 59.4 participants supported with a mean of (4.2188). These findings were consistent with Naibor and Moronge (2018) found out suppliers' financial status, technical capability, capacity and culture evaluation influences performance of manufacturing firms

### 4.4.3 Buyer-Supplier Relationship

The following 4 statements were formulated to measure Buyer-Supplier relationship and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.5: Buyer-Supplier Relationship**

| Buyer-Supplier Relationship | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| We are committed to establish a partnership with our suppliers. | 0(0%) | 1(3.1%) | 5(15.6%) | 11(34.4%) | 15(46.9%) | 4.2500 | 0.84242 |
| We involve our suppliers early in our processes to ensure quality and motivation. | 0(0%) | 1(3.1%) | 2(6.3%) | 17(53.1%) | 12(37.5%) | 4.2500 | 0.71842 |
| Our suppliers selected are paid on time to enhance future relationship. | 0(0%) | 3(9.4%) | 6(18.8%) | 10(31.3%) | 13(40.6%) | 4.0131 | 0.99950 |
| Our institution encourages suppliers to be trained to ensure competency in their service provision. | 0(0%) | 3(9.4%) | 1(3.1%) | 10(31.3%) | 18(56.3%) | 4.3438 | 0.93703 |

**Source: Field 2022**

A majority (46.9%) of the respondents were in agreement that they love being committed to establish a partnership with a mean of (4.2500). As to whether the respondents involve their suppliers early in their processes to ensure quality and motivation, (53.1%) were in agreement with a mean of (4.2500). With regards to whether the suppliers selected are paid on time to enhance future relationship, 40.6 of participants supported with a mean (4.0131). 56.3% of the respondents were in agreement that the institution encourages suppliers to be trained to ensure competency in their service provision with a mean of (4.3438). The findings corroborate with Watiri and Kihara, (2017) who showed that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors.

### 4.4.4 Information Sharing

The following six statements were formulated to measure Information Sharing and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.6: Information Sharing**

| Information Sharing | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|
| We have an efficient information management system. | 1(3.1%) | 0(0%) | 6(18.8%) | 12(37.5%) | 13(40.6%) | 4.1250 | 0.94186 |
| We embrace information technology in our institution. | 1(3.1%) | 0(0%) | 5(15.6%) | 14(43.8%) | 12(37.5%) | 4.1250 | 0.90696 |
| There is an efficient internal information exchange. | 0(0%) | 1(3.1%) | 7(21.9%) | 11(34.4%) | 13(40.6%) | 4.1250 | 0.87067 |
| Exchange of information between the suppliers and the institution is reliable and effective. | 1(3.1%) | 0(0%) | 3(9.4%) | 19(59.4%) | 9(28.1%) | 4.0938 | 0.81752 |
| We only exchange credible basic information. | 0(0%) | 2(6.2%) | 7(21.9%) | 7(21.9%) | 16(50%) | 4.1563 | 0.98732 |
| Our way of sharing information have proved to build and | 1(3.1%) | 0(0%) | 1(3.1%) | 15(46.9%) | 15(46.9%) | 4.3438 | 0.82733 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| strengthen our social bonds with suppliers. | | | | | | | |
| We share information with suppliers to improve productivity. | 0(0%) | 1(3.1%) | 7(21.9%) | 14(43.8%) | 10(31.3%) | 4.0313 | 0.82244 |
| Our institution provides a clear reliable channel for supplier to communicate their issues. | 0(0%) | 1(3.1%) | 5(15.6%) | 16(50.0%) | 10(31.3%) | 4.9038 | 0.77707 |

**Source: Field 2022**

A portion of participants (40.6%) in the institution admitted having an efficient information management system a mean of (4.1250). 43.8% participants embrace information technology in the institution with a mean of (4.1250). In regards to whether there is an efficient internal information exchange, 40.6 were in agreement with a mean of (4.1250). As to whether exchange of information between the suppliers and the institution is reliable and effective, 59.4% participants concur with a mean of (4.0938). On what type of information is exchanged in the institution, 50% of the research participants admitted that they only exchange credible basic information, with a mean of (4.1563). 46.9% participants also concur that their way of sharing information have proved to build and strengthen their social bonds with suppliers with a mean of (4.3438). portion of participants that they share information with suppliers to improve productivity with a percentage of 43.8 and a mean of (4.0313). As to whether the institution provides a clear reliable channel for supplier to communicate their issues, 50% participants concur a mean of (4.9038). The findings corroborate with Abdallah (2014), observed that efficiency of the outcome is due to the practices of supply chain embraced. The findings are supported by Ahlam and Hebah (2018), indicated that passing of information results to a number of benefits to manufacturing industries however, passing information accidentally to service providers can also injure organizations level of outcome. Competitors access to company's secret negatively injures performance.

### 4.4.5 Government Policy

The following three statements were formulated to measure Government Policy and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.7: Government Policy**

| Government Policy | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|
| We comply with the regulation set by the government. | 0(0%) | 0(0%) | 6(18.8%) | 11(34.4%) | 15(46.9%) | 4.2813 | 0.77186 |
| The procurement function is conducted in a systematic manner. | 0(0%) | 0(0%) | 2(6.3%) | 15(46.9%) | 15(46.9%) | 4.4063 | 0.61484 |
| PPRA is actively involved in enforcing the procurement standards in our institution. | 0(0%) | 1(3.1%) | 4(12.5%) | 6(18.8%) | 21(65.6%) | 4.4688 | 0.84183 |
| We access all the circulars given by the government to enhance procurement functions. | 0(0%) | 0(0%) | 3(9.4%) | 9(28.1%) | 20(62.5%) | 4.5313 | 0.67127 |
| We conduct procurement planning as required by regulation. | 0(0%) | 1(3.1%) | 1(3.1%) | 11(34.4%) | 19(59.4%) | 4.5000 | 0.71842 |

**Source: Field 2022**

Research participants (46.9%) concur that they comply with regulations set by the government having a mean of (4.2813). With regards to whether the procurement function is conducted in a systematic manner (46.9%) were in total agreement with a mean of (4.4063). 65.6% participants assent that PPRA is actively involved in enforcing the procurement standards in the institution with a mean of (4.4688). As to whether the institution access all the circulars given by the government to enhance procurement, (62.5%) of the respondents were in agreement with a mean of (4.5313). 59.4% participants concur that institution conduct procurement planning as required by the regulation. This study finding are supported by Lukacs (2011) who opined that a country that has implemented public polices encourages growth and formalization. A survey conducted by National public procurement integrity baseline survey (2009) observed that failure to implement government policies in in counties resulted to embezzlement of public funds in Kenya. However, Despite the government efforts to formulate polices in county government the performance has not been promising, (Moronge&Mbugua 2016).

### 4.4.6 Procurement Function performance in Kakamega County

The following six statements were formulated to measure the performance of procurement function in Kakamega County of and the participants were requested to show the degree of their agreement and disagreement to the statements. Table below presents the outcome: -

**Table 4.8: Procurement Function performance in Kakamega County**

| Procurement Function performance | 1(SD) | 2(D) | 3(N) | 4(A) | 5(SA) | Mean | STD |
|---|---|---|---|---|---|---|---|
| There is a significant reduction on the overall cost incurred. | 2(6.3%) | 0(0%) | 9(28.1%) | 11(34.4%) | 9(28.1%) | 4.7500 | 5.44177 |
| There is timely delivery of goods and services. | 0(0%) | 2(6.3%) | 2(6.3%) | 19(59.4%) | 9(28.1%) | 4.0938 | 0.77707 |
| Our clients requirements are met in terms of quality. | 0(0%) | 0(0%) | 5(15.6%) | 9(28.1%) | 18(56.3%) | 4.4063 | 0.75602 |
| Our institution utilizes resources are well. | 0(0%) | 1(3.1%) | 5(15.6%) | 8(25.0%) | 18(56.3%) | 4.3438 | 0.86544 |
| Organization image is best. | 0(0%) | 1(3.1%) | 2(6.3%) | 14(43.8%) | 15(46.9%) | 4.3438 | 0.74528 |
| Other institutions do benchmarking in our institution. | 1(3.1%) | 0(0%) | 4(12.5%) | 6(18.8%) | 21(65.6%) | 4.4375 | 0.94826 |

**Source: Field 2022**

A good number of the respondents (34.4%) were in agreement that there is a significant reduction on the overall cost incurred with a mean of (4.7500). 59.4% participants concurred that there is timely delivery of goods and services giving a mean of (4.0938). 56.3% participants assented that their client's quality requirements are met with mean of (4.4063). As to whether there is proper utilization of resources in the institution, 56.3% of the respondents agreed with a mean of (4.3438). 46.9% participants concurred that organizations image is the best as far as supply chain management practices is practiced in Kakamega County gave mean of (4.3438). 65.6% participants assented that other institutions do benchmarking in our institution with a mean of (4.4375). As supported by Kwai (2005), procurement performance is cost minimisation, customers satisfaction, timely deliveries and quality service provisions. High profit levels and quality services are realized when systems are in place to manage the supply chain components.

### 4.5 Diagnostics Tests

According to Jiang, Gollan and Brooks, (2015) the model of linear regression and scrutiny is supported by several presumptions that are needed to show approximate expertise that have attractive elements and test hypothesis with regard to approximate coefficient which can be analyzed. These assumptions include; homogeneity, linearity, collinearity and normality. The present study used assumptions of normality and multi-collinearity.

#### 4.5.1 Test for Normality

According to Nyikuli (2019), normality is crucial assumption used in statistical tests. Normality presupposes that the elements are normally distributed. Rozali & Wah (2011) posits a normally distributed data is satisfactory data. Normality can be tested using Jackie Bera, normality plots and histograms, probability plots and Kolmogorov smirnov. The researcher used Kolmogorov smirnov to test for normality. Kolmogorov smirnov was first propounded by Kolmogorov Andrey and Nikolai Smirnov in 1933, (Arnold & Emerson, 2011). According to Sabana (2014), Kolmogorov smirnov is superior because it can detect abnormally distributed data. As a law of thumb, when the significance value less than 0.05, violation is depicted and thus the research cannot move to regression.

**Table 4.9: Tests of Normality**

**Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Procurement Planning | .160 | 32 | .036 | .935 | 32 | .053 |
| Supplier Selection | .090 | 32 | .200* | .973 | 32 | .575 |
| Buyer Supplier Relationship | .227 | 32 | .000 | .914 | 32 | .014 |
| Information Sharing | .092 | 32 | .200* | .981 | 32 | .822 |
| Government Policies | .169 | 32 | .020 | .927 | 32 | .033 |
| Performance | .147 | 32 | .077 | .956 | 32 | .207 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**Source: Field 2022**

The Kolmogorov - Smirnov statistics is utilized to check for normality of responses of variables under study. At 95% confidence level, the p values ≥ 0.05, imply all the data is normally distributed. From the output above, it is evident that there was a normal distribution of data except for Procurement Planning, Buyer Supplier Relationship and government Policies which had p value of 0.036, 0.000 and 0.020 respectively.

### 4.5.2 Test for Multi-Collinearity

A correlation analysis was conducted to investigate the interconnection all the independent variables. Table below shows the outcome: -

**Correlations**

| | | Procurement Planning | Supplier Selection | Buyer Supplier Relationship | Information Sharing | County Policies | Performance |
|---|---|---|---|---|---|---|---|
| Procurement Planning | Pearson Correlation | 1 | .407* | .469** | .237 | .124 | .126 |
| | Sig. (2-tailed) | | .021 | .007 | .192 | .497 | .491 |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |
| Supplier Selection | Pearson Correlation | .407* | 1 | .533** | .500** | .448* | .315 |
| | Sig. (2-tailed) | .021 | | .002 | .004 | .010 | .079 |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |
| Buyer Supplier Relationship | Pearson Correlation | .469** | .533** | 1 | .340 | .450** | .634** |
| | Sig. (2-tailed) | .007 | .002 | | .057 | .010 | .000 |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |
| Information Sharing | Pearson Correlation | .237 | .500** | .340 | 1 | .749** | .326 |
| | Sig. (2-tailed) | .192 | .004 | .057 | | .000 | .068 |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |
| County Policies | Pearson Correlation | .124 | .448* | .450** | .749** | 1 | .365* |
| | Sig. (2-tailed) | .497 | .010 | .010 | .000 | | .040 |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |
| Performance | Pearson Correlation | .126 | .315 | .634** | .326 | .365* | 1 |
| | Sig. (2-tailed) | .491 | .079 | .000 | .068 | .040 | |
| | N | 32 | 32 | 32 | 32 | 32 | 32 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

**Source: Field 2022**

In table 4.10, results indicated that the correlation between procurement planning and supplier selection was positive and significant (r = **.407***) at 95% significance measure. Similarly, the correlation between procurement planning and buyer supplier relationship was positive and significant (r = **.469****). Further, correlation between information sharing and supplier selection was positive and significant (r =.237**). Correlation of 1 implies strong positive correlation between the variables, correlation of 0 implies no

correlation and correlation of -1 implies negative correlation. Since all the coefficients of correlation are less than 0.8, it implies that the variables are not strongly correlated hence no instance of multi collinearity. The assumption of multi-collinearity was not violated and hence the data proceeded for regression analysis.

### 4.6 Regression Analysis

#### 4.6.1 Procurement planning

To test the % change of dependent variable (performance of procurement function) a simple regression analysis was utilized as attributed by the independent variable (Procurement planning). This was significant in answering the first agenda of the study which examined the interconnections between procurement planning and procurement function performance in Kakamega County, Kenya. Table 4.12 shows the regression results: -

**Table 4.11 Regression analysis on procurement planning**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.126[a]** | **.016** | **-.017** | **.57151** | **.016** | **.486** | **1** | **30** | **.491** |

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **.159** | **1** | **.159** | **.486** | **.491[b]** |
| | Residual | **9.799** | **30** | **.327** | | |
| | Total | **9.957** | **31** | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | **3.248** | **.543** | | **5.987** | **.000** |
| | Procurement Planning | **.095** | **.136** | **.126** | **.697** | **.491** |

a. Dependent Variable: Performance

**Source: Field 2022**

The results indicate an R (Coefficient of correlation) of 0.126 and an $R^2$ (Coefficient of Determination) of 0.016. This suggested 1.6 % of changes in the dependent variable (procurement function performance) was spelled out by the independent variable (procurement planning).

The F test presents a value of (1, 30) =0.486, P>0.05, which concurs not with goodness of fit of the model in spelling out changes in the dependent variable. Indication that procurement planning was not a major predictor of procurement function performance in Kakamega County, Kenya. From these findings, null hypothesis is rejected which stated that Procurement Planning has no significant influence on procurement function performance of Kakamega County. These findings contradict that of Chepngetich (2018) who observed that a positive connection exists betwixt delivery of services, effective need evaluation and specification of cost, observations made was that a positive connection exists betwixt delivery of services, effective need evaluation and specification of cost.

The regression equation to measure the changes in procurement function performance in Kakamega County, as attributed to procurement planning was stated as below;

$$PFP = 3.248 + 0.095PP + e$$

Where;

PFP is the Procurement Function performance

PP is the Procurement Planning

When all the other external factors are held constant, there would be a 3.248-unit increase in procurement function performance. When there is a unit increase in procurement planning, there will be a corresponding increase in procurement function performance of 0.095.

Findings concurs with study done by Salim & Kitheka (2019), who asserted that planning alone is not enough to enjoy the results, rather effective implementation results to achievement of value for money, perfect allocation of resources and efficiency of processes in an organisation.

The findings contradict that of Duggan, (2015), who discovered that performance of procurement was as a result of effective planning of procurement

### 4.6.2 Supplier Selection

To test the % change of dependent variable (procurement function performance) a simple regression analysis was utilized as attributed by the independent variable (supplier selection). This was significant in answering the second agenda of the study the study which was to find out the relationship between supplier selection and procurement function performance in Kakamega County, Kenya.

**Table 4.12 Regression analysis on supplier selection**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.315[a]** | **.099** | **.069** | **.54678** | **.099** | **3.306** | **1** | **30** | **.079** |

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **.988** | **1** | **.988** | **3.306** | **.079[b]** |
| | Residual | **8.969** | **30** | **.299** | | |
| | Total | **9.957** | **31** | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | T | Sig. |
| 1 | (Constant) | **2.830** | **.445** | | **6.362** | **.000** |
| | Supplier Selection | **.235** | **.129** | **.315** | **1.818** | **.079** |

a. Dependent Variable: Performance

**Source: Field 2022**

The results indicate an R (Coefficient of correlation) of 0.315 and an $R^2$ (Coefficient of Determination) of 0.099. This suggested 9.9% of the changes in the dependent variable (procurement function performance) was spelt out by the independent variable (supplier selection).

The F test display a value of (1, 30) =3.306, P>0.05, which holds up the goodness of fit of the model in spelling out changes in the dependent variable. It also signifies supplier selection is not a very

important predictor of procurement function performance in Kakamega County, Kenya. From these findings, we concur with null hypothesis which stated that Supplier Selection has no significant influence on procurement function performance in Kakamega County.

The regression equation measured changes in procurement function performance as attributed to supplier selection was stated as below;

$$PPF = 2.830 + 0.235SS + e$$

Where;

PPF is the Procurement Function performance

SS is Supplier Selection

In the event that external factors are held constant, 2.342-unit growth in procurement function performance. With a unit growth in supplier selection, there will be a corresponding growth in procurement function performance 0.235 units. These findings contradict with Odhiambo (2015) who observed organizations yielding a lot of business when selection of suppliers is effectively conducted. The findings were also contradicting that of Luthra et al (2017) selection of suppliers when collaboratively done enhances organizational performance.

### 4.6.3 Buyer-Supplier Relationship

To test the % change of dependent variable (procurement function performance) a simple regression analysis was utilized as attributed by the independent variable (buyer-supplier relationship). This was significant in answering the third agenda of the study which was to determine the relationship between buyer-supplier relationship and procurement function performance in Kakamega County, Kenya. Table 4.13 shows the regression results: -

**Table 4.13 Regression analysis on buyer-supplier relationship**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.634[a]** | **.402** | **.382** | **.44554** | **.402** | **20.162** | **1** | **30** | **.000** |

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **4.002** | **1** | **4.002** | **20.162** | **.000[b]** |
| | Residual | **5.955** | **30** | **.199** | | |
| | Total | **9.957** | **31** | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | T | Sig. |
| 1 | (Constant) | **1.599** | **.457** | | **3.500** | **.001** |
| | Buyer-Supplier Relationship | **.555** | **.124** | **.634** | **4.490** | **.000** |

a. Dependent Variable: Performance

**Source: Field 2022**

An indication of an R (Coefficient of correlation) of 0.634 and an $R^2$ (Coefficient of Determination) of 0.402 resulted from the analysis. This suggested 40.2% of the changes in the dependent variable (procurement function performance) was spelt out by the independent variable (buyer-supplier relationship).

The F test gave a value of (1, 30) =20.162, P<0.05, which supports the goodness of fit of the model in spelling out changes in the dependent variable. It also signifies buyer-supplier relationship was a very critical predictor of procurement function performance in Kakamega County, Kenya. From these findings, we reject the null hypothesis which stated that Buyer Supplier Relationship has no significant influence on procurement function performance in Kakamega County.

The regression equation measures changes in procurement function performance as attributed to buyer-supplier relationship was stated as below;

$$PFP = 1.599 + 0.555BSR + e$$

Where;

PFP is the Procurement Function performance

BSR is the Buyer Supplier Relationship

When all external factors are held constant, a 1.599 -unit increase in procurement function performance. When there is a unit increase in buyer-supplier relationship, procurement function performance will increase by 0.555 units.

These findings agree with Omondi (2015 who discovered distributors in Kisumu had adopted the concept of relationship between buyers and suppliers. This concept of buyer-supplier relationship has enhanced performance of the organizations to a large extent. This concurs with the Glodziak, (2015) asserted that buyer supplier relations boost procurement function performance in entities. The findings are supported by Watiri and Kihara, (2017) who established competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors

### 4.6.4 Information Sharing

To test the % change of dependent variable (procurement function performance) a simple regression analysis was utilized as attributed by the independent variable (information sharing). This was significant in answering the fourth agenda of the study which was to determine the relationship between information sharing and procurement function performance in Kakamega County, Kenya. Table 4.14 shows the regression results: -

**Table 4.14 Regression analysis on information sharing**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.326[a]** | **.106** | **.077** | **.54462** | **.106** | **3.571** | **1** | **30** | **.068** |

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **1.059** | **1** | **1.059** | **3.571** | **.068[b]** |
| | Residual | **8.898** | **30** | **.297** | | |
| | Total | **9.957** | **31** | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | **2.925** | **.380** | | **7.702** | **.000** |
| | InformationSharing | **.213** | **.113** | **.326** | **1.890** | **.068** |

a. Dependent Variable: Performance

**Source: Field 2022**

The results indicate an r (Coefficient of correlation) of 0.326 and an $R^2$ (Coefficient of Determination) of 0.106. This implied that 10.6% changes in the dependent variable (procurement function performance) spelled out by the independent variable (information sharing).

The F test gave a value of (1, 30) =3.571, P>0.05, which does not pillar the goodness of fit of the model in spelling out changes in the dependent variable. From these findings, we concur the null hypothesis which stated that sharing information has no significant influence on procurement function performance of Kakamega County. The regression equation to measure changes in procurement function performance as attributed to information was stated as below;

$$PFP = 2.925 + 0.213\text{IS} + e$$

Where;

PFP is the Procurement Function performance

IS the Information Sharing

Considering that all the other external factors are held constant, there would be a 2.925 unit increase in performance of procurement functions. When there is a unit increase in information sharing, procurement function performance will increase by 0.213 units. The findings corroborate with that of Baihaqi & Sohal (2013), who conducted a study that established sharing information has no impact on the outcome in terms of performance of an organization. Further opined that information sharing is vital but not sufficient alone to boost the outcome. A study carried out by Khalil, Khan & Rashid (2018), showed close relationship with partners and suppliers, extend of knowledge sharing does not affect organisation level of outcome.

However, Crossman (2017) opined that information sharing is a very important predictor of performance of procurement functions. Yang and Maxwell, (2011) also reiterates that performance of an organization and its efficiency are some of benefits of information sharing.

### 4.6.5 Multiple regression analysis

This was employed to test percentage change in the dependent variable (procurement function performance) as attributed by independent variable (supply chain management practices). This was significant in answering the general aim of the study determining the relationship SCMPs and performance of procurement functions in Kakamega, Kenya. Table 4.15 shows the multiple regression analysis results: -

**Table 4.15 Multiple Regression Analysis**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.678[a]** | **.460** | **.380** | **.44634** | **.460** | **5.745** | **4** | **27** | **.002** |

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **4.578** | **4** | **1.145** | **5.745** | **.002[b]** |
| | Residual | **5.379** | **27** | **.199** | | |
| | Total | **9.957** | **31** | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | **1.797** | **.532** | | **3.376** | **.002** |
| | Procurement Planning | **-.168** | **.123** | **-.224** | **-1.368** | **.183** |
| | Supplier Selection | **-.042** | **.139** | **-.057** | **-.306** | **.762** |
| | Buyer-Supplier Relationship | **.624** | **.155** | **.713** | **4.015** | **.000** |
| | Information Sharing | **.108** | **.107** | **.165** | **1.007** | **.323** |

a. Dependent Variable: Performance

**Source: Field 2022**

The outcome of the analysis indicated an R (Coefficient of correlation) of 0.678 and an $R^2$ (Coefficient of Determination) of 0.460. This implied that 46.0% changes in the dependent variable (procurement function performance) spelt out by the independent variable (SCMPs). The F test gave a value of (4, 27) =5.745, P<0.05, which supports the goodness of fit of the model in explaining the changes in the dependent variable. It also signifies supply chain management practices were very important predictors of procurement function performance in Kakamega County, Kenya.

The regression equation measures changes in procurement function performance as attributed to supply chain management practices was stated as below;

$$PFP = 1.797 - 0.168PP - 0.042SS + 0.624BS + 0.108 + e$$

Where;

PFP is the procurement function performance

PP is Procurement Planning

SS is Supplier Selection

BS is Buyer Supplier Relation

Considering that all the other external factors are held constant, there would be a 1.797-unit increase in procurement function performance. When there is a unit increase in procurement planning there will be a corresponding decrease in procurement function performance of (-0.168) units, with a unit increase in supplier selection, there will be a corresponding increase in procurement function performance of (-0.042) in procurement function performance, with a unit increase in buyer-supplier relation, there will be a corresponding increase in procurement function performance of (0.624) units. Consequently, when there is a unit increase in buyer-supplier relations, there will be a corresponding decrease in procurement function performance of (0.108) units.

These findings agrees with that of Gorane and Kant (2017) how implementation of SCMPs enhances operational performance in organizations. Customer satisfactions and successful overall organization wellbeing is as a result of implementation of SCMPs. Likewise, a study by Abdallah (2014) observed that efficiency of the outcome is due to the practices of supply chain embraced. The findings are affirmed by Watiri and Kihara (2017) who observed that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors. However, Shobayo (2017) established that SCMPs does not influence procurement performance.

### 4.6.6 Hierarchical Regression to check the moderating effect

This was conducted to check moderating effect of government policies on the relationship between SCMPs and procurement function performance in Kakamega, Kenya. Table 4.16 shows the Hierarchical Regression results: -

**Table 4.16 Hierarchical regression on moderator**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | **.678[a]** | **.460** | **.380** | **.44634** | **.460** | **5.745** | **4** | **27** | **.002** |
| 2 | **.679[b]** | **.462** | **.358** | **.45409** | **.002** | **.087** | **1** | **26** | **.770** |
| 3 | **.722[c]** | **.522** | **.355** | **.45504** | **.060** | **.964** | **3** | **23** | **.427** |

a. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection

b. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection, County Policies

b. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection, County Policies, Information Sharing Policies, Buyer Supplier Relationship Policies, Procurement Planning Policies

**Source: Field 2022**

The first model indicates a significant coefficient of determination ($R^2$) of 0.460 with a $P<0.05$. This finding disapproved the hypothesis that Supply Chain Management Practices had no significant influence on procurement function performance in county of Kakamega. With a coefficient correlation of 0.678, it indicated positive relationship between SCMPs and procurement function performance. The second model indicated the effect after the introduction of the moderating variable (Government policies). There was a slight increase in the coefficient of determination by 0.2% while the p values were higher than 0.05. This indicated government policies could not effectively moderate the relationship between SCMPs and procurement function performance. The third model indicated the interaction terms into the model and they accounted for a 6% change in the value of $R^2$.

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | **4.578** | **4** | **1.145** | **5.745** | **.002[b]** |
| | Residual | **5.379** | **27** | **.199** | | |
| | Total | **9.957** | **31** | | | |
| 2 | Regression | **4.596** | **5** | **.919** | **4.458** | **.005[c]** |
| | Residual | **5.361** | **26** | **.206** | | |
| | Total | **9.957** | **31** | | | |
| 3 | Regression | **5.195** | **8** | **.649** | **3.136** | **.015[d]** |
| | Residual | **4.762** | **23** | **.207** | | |
| | Total | **9.957** | **31** | | | |

a. Dependent Variable: Performance
b. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection
c. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection, Government Policies
d. Predictors: (Constant), Information Sharing, Procurement Planning, Buyer Supplier Relationship, Supplier Selection, government Policies, Information Sharing Policies, Buyer Supplier Relationship Policies, Procurement Planning Policies

**Source: Field 2022**

From the findings of the first model, the p values were lower than 0.05 indicating supply chain management practices were good predictors of procurement function performance in the county government of Kakamega. Further the findings in the second model indicated that after the introduction of the moderating variable, the model was still fit in explaining the moderating effect of the variable. The third model which is amalgamation of all the independent variables, the moderator and the interaction terms still indicated model fitness for the moderation effect.

**Coefficients[a]**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | **1.797** | **.532** | | **3.376** | **.002** |
| | Procurement Planning | **-.168** | **.123** | **-.224** | **-1.368** | **.183** |
| | Supplier Selection | **-.042** | **.139** | **-.057** | **-.306** | **.762** |
| | Buyer Supplier Relationship | **.624** | **.155** | **.713** | **4.015** | **.000** |
| | Information Sharing | **.108** | **.107** | **.165** | **1.007** | **.323** |
| 2 | (Constant) | **1.858** | **.579** | | **3.207** | **.004** |
| | Procurement Planning | **-.178** | **.129** | **-.237** | **-1.375** | **.181** |
| | Supplier Selection | **-.041** | **.141** | **-.055** | **-.290** | **.774** |
| | Buyer Supplier Relationship | **.642** | **.169** | **.733** | **3.794** | **.001** |
| | Information Sharing | **.139** | **.151** | **.213** | **.918** | **.367** |
| | Government Policies | **-.057** | **.193** | **-.070** | **-.295** | **.770** |
| 3 | (Constant) | **.422** | **4.129** | | **.102** | **.920** |
| | Procurement Planning | **.948** | **1.006** | **1.263** | **.942** | **.356** |
| | Supplier Selection | **-.069** | **.155** | **-.092** | **-.442** | **.662** |
| | Buyer Supplier Relationship | **-.521** | **.827** | **-.595** | **-.630** | **.535** |
| | Information Sharing | **.584** | **.669** | **.896** | **.873** | **.392** |
| | Government Policies | **.185** | **1.111** | **.226** | **.167** | **.869** |
| | Procurement Planning Policies | **-.320** | **.285** | **-2.324** | **-1.124** | **.273** |
| | Buyer Supplier Relationship Policies | **.373** | **.265** | **2.599** | **1.409** | **.172** |
| | Information Sharing Policies | **-.116** | **.198** | **-.996** | **-.588** | **.562** |

a. Dependent Variable: Performance

**Source: Field 2022**

For the model one, the beta values for Procurement planning and supplier selection were negative indicating negative contribution to procurement function performance with p values greater than 0.05. Buyer Supplier Relationship had beta values of 0.624 with its p values lower than 0.05 indicating positive and significant contribution to the procurement function performance. Information sharing had a positive beta value and non-significant p value. The second model introduced the moderating variable but it had a negative beta value of -0.057 and a non-significant P value greater than 0.05 (0.770). With the set in of interaction terms, the significance of each variable becomes greater than 0.05 as indicated in the third model. The equation to show the moderating effect is as follows: -

$$Y = 0.422 + 0.948\ X_1 - 0.069X_2 - o.521X_3 + 0.584X_4 + 0.185X_5 - 0.0.320X_1 * X_5 + 0.373X_2 * X_5 - 0.116X_3 * X_5 + e$$

Where; PFP is the procurement function performance

PP is Procurement Planning

SS is Supplier Selection

BS is Buyer Supplier Relation

IS is Information sharing

M is County Government Policies

# CHAPTER FIVE

# SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

Summary of findings, conclusion and recommendations of the research study are laid in this chapter. They are founded on the study variables reviewed and researched.

## 5.2 Summary of the Findings

The main agenda for the study as to establish the effect of SCMPs, Government policy and procurement function performance in Kakamega county, Kenya. The variables for procurement practices were; procurement planning, supplier selection, buyer-supplier relation and information sharing with government policy as a moderating variable.

### 5.2.1 Procurement planning and procurement function performance

A coefficient of correlation (r) as 0.126**, P>0.05 at 95.0% confidence level observed in the first variable. This indicated a positive but a non-significant relationship betwixt procurement planning and procurement function performance Kakamega county, Kenya. The results further indicated an $R^2$ value of 0.016 indicating that procurement planning could predict 1.6% changes in procurement function performance in Kakamega county. It was therefore a non-significant predictor of procurement function performance.

### 5.2.2 Supplier Selection and procurement function performance

The second goal was to unearth the interconnection betwixt supplier selection and procurement function performance in Kakamega County, Kenya. The Coefficient of correlation (r) in the linear regression (r) 0.315**, P>0.05 at 95% confidence level. A positive but non-significant interconnection between supplier selection and procurement function performance in Kakamega county, Kenya. Indication of

$R^2$ (Coefficient of Determination) was 0.099. Shows supplier selection as an independent variable could explain 9.9% of the dependent variable (procurement function performance).

### 5.2.3Buyer Supplier Relation and procurement function performance

Third objective determined effect of buyer supplier relation on procurement function performance. A coefficient of correlation (r) as 0.634**, P<0.05 at 95.0% confidence level observed. An indication of a positive and significant interconnection between buyer supplier relation and procurement function performance in Kakamega county, Kenya. The results further indicated an $R^2$ value of 0.402 indicating that Buyer supplier relation could predict 40.2% changes in procurement function performance. The findings are supported by Watiri and Kihara, (2017) who observed that competitive advantage in manufacturing firm was greatly influenced by strategic supplier relationship which enabled their customers to distinguish their products from that of their competitors.

### 5.2.4 Information Sharing and procurement function performance

Fourth objective determined the effect of information sharing on procurement function performance. A coefficient of correlation (r) as 0.326**, P>0.05 at 95.0% confidence level was indicated. An indication of a positive but a non-significant connection between information sharing and procurement function performance in Kakamega county, Kenya. The results further indicated an $R^2$ value of 0.106 indicating that information sharing could predict 10.6% changes in procurement function performance. These findings are supported by Khalil, Khan & Rashid (2018), showed close relationship with partners and suppliers, extend of knowledge sharing does not affect organisation level of outcome.

### 5.2.5 The moderating effect of Government Policy on the relationship between supply chain management practices and procurement function performance

Government Policy moderated the relationship SCMPs and procurement function performance in Kakamega County, Kenya though it was a non-significant influence. From the hierarchical linear regression model, government policy had a non-significant moderating effect shown by model

summary and ANOVA results. With the introduction of the government policy as a moderating factor R square moved from 46.0% (unmoderated R square= 0.460, P=0.002) to 52.2% (Moderated R square=0.522, P=0.427) representing a non-significant change of 6.2% change in R square before and after introduction of government policy as a moderator, therefore the fourth null hypothesis was accepted.

### 5.3 Conclusions

The conclusion drawn were founded on the findings of the study after testing all the hypotheses in the study.

In the first objective, a conclusion was drawn that Procurement planning does not affect procurement function performance in Kakamega county, Kenya. Further, an outstanding procurement planning did not bring up an effective procurement function performance in Kakamega county, Kenya.

In regards to the second objective, conclusion was made that Supplier selection significantly does not effect on procurement function performance. This variable failed to enhance and create effectiveness on the procurement function performance in Kakamega county, Kenya.

Concerning third objective, conclusion was drawn that Buyer supplier relationship significantly effects on procurement function performance. This variable enhanced and created effectiveness on the procurement function performance in Kakamega county, Kenya.

Based on fourth objective of the study, Information sharing also was observed to have no significant effect on procurement function performance in Kakamega county, Kenya.

The study concluded that government policy had no significant moderating effect on the relationship between SCMPs and procurement function performance Kakamega County, Kenya. Enforcement of the government policies does not effectively moderate the relationship between the independent variable (SCMPs) and the dependent variable (procurement function performance).

Generally, the findings from multiple linear regression model indicated a statistically significant model which answers the general objective of the study. Therefore, changes in procurement planning, Supplier selection, Buyer-supplier selection and information sharing positively influences the procurement function performance in Kakamega county, Kenya.

### 5.4 Recommendations

Anchoring on study results and conclusions reached, the following recommendations were made:-

The study posits that procurement planning does not contribute significantly to procurement function performance in Kakamega County, Kenya. Therefore, this study recommends the adoption of all SCMPs but ensure procurement plans are implemented for procurement function performance in Kakamega County.

Based on the findings and conclusion in this study, the second objective confirms supplier selection alone has no significant contribution to procurement function performance in Kakamega county, Kenya. The study recommends the modification of supplier selection criteria for procurement function performance in Kakamega County, Kenya.

Thirdly, in regards to buyer supplier relationship, the objective of the study indicates that it's contribution on procurement function performance is also positive and significant. Therefore, it recommends improvement in buyer supplier relationship which positively influences procurement function performance in Kakamega county, Kenya.

Regarding the fourth objective of the study, information sharing has no influence on procurement function performance in Kakamega county, Kenya. Therefore, this study recommends the adoption of better strategies of sharing information to ensure procurement function performance in Kakamega county, Kenya.

The moderating effect of government policy on the relationship between SCMPs and procurement function performance in Kakamega county, Kenya, was positive though insignificant. Therefore, this study recommends that government policy be adopted in order to moderate the relationship between SCMPs and procurement function performance in Kakamega county, Kenya.

Finally, the general objective indicates that the combined effect of procurement planning, supplier selection, buyer supplier relation and information sharing on procurement function performance in Kakamega county, Kenya, was positive and statistically significant. Hence the study recommends the application of all these variables be adopted to enhance procurement function performance in Kakamega county, Kenya.

### 5.5 Suggestions for further research

This study suggests a comparative study be carried out in other institutions such as banks or universities in Kenya not only in the county government to see the contribution of SCMPs and how it influences the procurement function performance in those institutions.

The study used four variables that influence the procurement function performance in Kakamega county. Still, this can be narrowed down to three variable and also another variable can be used as moderating variable not necessarily government policy.

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# APPENDICES

## APPENDIX I: LETTER OF INTRODUCTION

Jared Okemwa Asande

Masinde Muliro University of Science and Technology,

School of Business and Economics,

P.O Box 190,

Kakamega.

Dear Sir/Madam,

**RE: INFORMATION GATHERING**

I am a Masters student at the University of Masinde Muliro University of Science and Technology, School of Business. In partial fulfilment of the requirement for Master of Business Administration, Logistics and Supply Chain management. I am conducting a research study on the **Effects of Supply Chain Management Practices, government policy and procurement function performance in Kakamega County, Kenya.**

I am glad to inform you that you have been selected to form part of the study. I would therefore kindly request you for assistance in completing the attached questionnaires which forms a major input of the research process. The information and data will be strictly being used for academic purposes only and strict confidence shall be observed on the same. Your co-operation will go a long way in ensuring the success of this project.

I would like to thank you in advance for your time and consideration.

Yours Sincerely,

Jared Okemwa Asande

MBA/G/01-54991/2017

Masinde Muliro of University of Science and Technology

## APPENDIX 2: QUESTIONNAIRE

This questionnaire has been designed for a single purpose of collecting data for study work. The data sought is meant to give input to the study topic which seeks to establish the effect of supply chain management practices, government policy and procurement function performance of Kakamega County in Kenya. High degree of confidentiality will be observed for any data provided which will be used for academic purposes only.

### 1. PROCUREMENT PLANNING

The following statements are aimed at obtaining the effect of procurement planning on the procurement function performance of Kakamega County Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| We have an active team that conducts procurement planning yearly | | | | | |
| Our institution implements all the yearly plans as required | | | | | |
| Through the procurement plans, we are able to monitor projects well | | | | | |
| Our institution estimates its yearly expenses | | | | | |

### 2. SUPPLIER SELECTION

The following statements are aimed at obtaining the effect of supplier selection on the procurement function performance of Kakamega County. Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| We select suppliers who are reliable | | | | | |
| Only suppliers who meet requirements are selected | | | | | |
| All suppliers are given opportunity to bid | | | | | |
| Our institution engages suppliers who are committed to provide quality services and works | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| During selection process we analyze the suppliers financial capacity | | | | | |
| Our institution have a clear supplier selection procedures | | | | | |

**3. BUYER-SUPPLIER RELATIONSHIP**

The following statements are aimed at obtaining the effect of buyer-supplier relationship on the procurement function performance of Kakamega County. Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| We are committed to build a long term relationship with our suppliers | | | | | |
| We involve our suppliers early in our processes to ensure quality and motivation | | | | | |
| Our suppliers selected are paid on time to enhance future relationship | | | | | |
| our institution encourages suppliers to be trained to ensure competency in their service provision. | | | | | |

**4. INFORMATION SHARING**

The following statements are aimed at obtaining the effect of information sharing on the procurement function performance in Kakamega County. Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| We have an efficient information management system | | | | | |
| We embrace information technology in our institution | | | | | |
| There is an efficient internal information exchange | | | | | |
| Exchange of information between the suppliers and the institution is reliable and effective | | | | | |
| We only exchange credible basic information | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Our way of sharing information have proved to build and strengthen our social bonds with suppliers | | | | | |
| We share information with suppliers to improve productivity | | | | | |
| Our institution provides a clear reliable channel for suppliers to communicate their issues | | | | | |

**5. GOVERNMENT POLICY**

The following statements are aimed at obtaining the moderating effect of government policy on the relationship between supply chain management practices and the procurement function performance in Kakamega County. Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| We comply with the regulation set by the government | | | | | |
| The procurement function is conducted in a systematic manner | | | | | |
| PPRA is actively involved in enforcing the procurement standard in our institution | | | | | |
| We access all the circulars given by the government to enhance procurement function | | | | | |
| We conduct procurement planning as required by regulation | | | | | |

**5. PROCUREMENT FUNCTION PERFORMANCE IN KAKAMEGA COUNTY**

The following statements are aimed at obtaining the effect of supply chain management practices on the procurement function performance in Kakamega County. Kindly rate the following statements from the scale 1-5; where

1-Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

| **Statements** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| There is a significant reduction on the overall cost incurred | | | | | |
| There is timely delivery of goods and services | | | | | |
| Our clients requirements are met in terms of quality | | | | | |
| Our institution utilizes resources are well | | | | | |

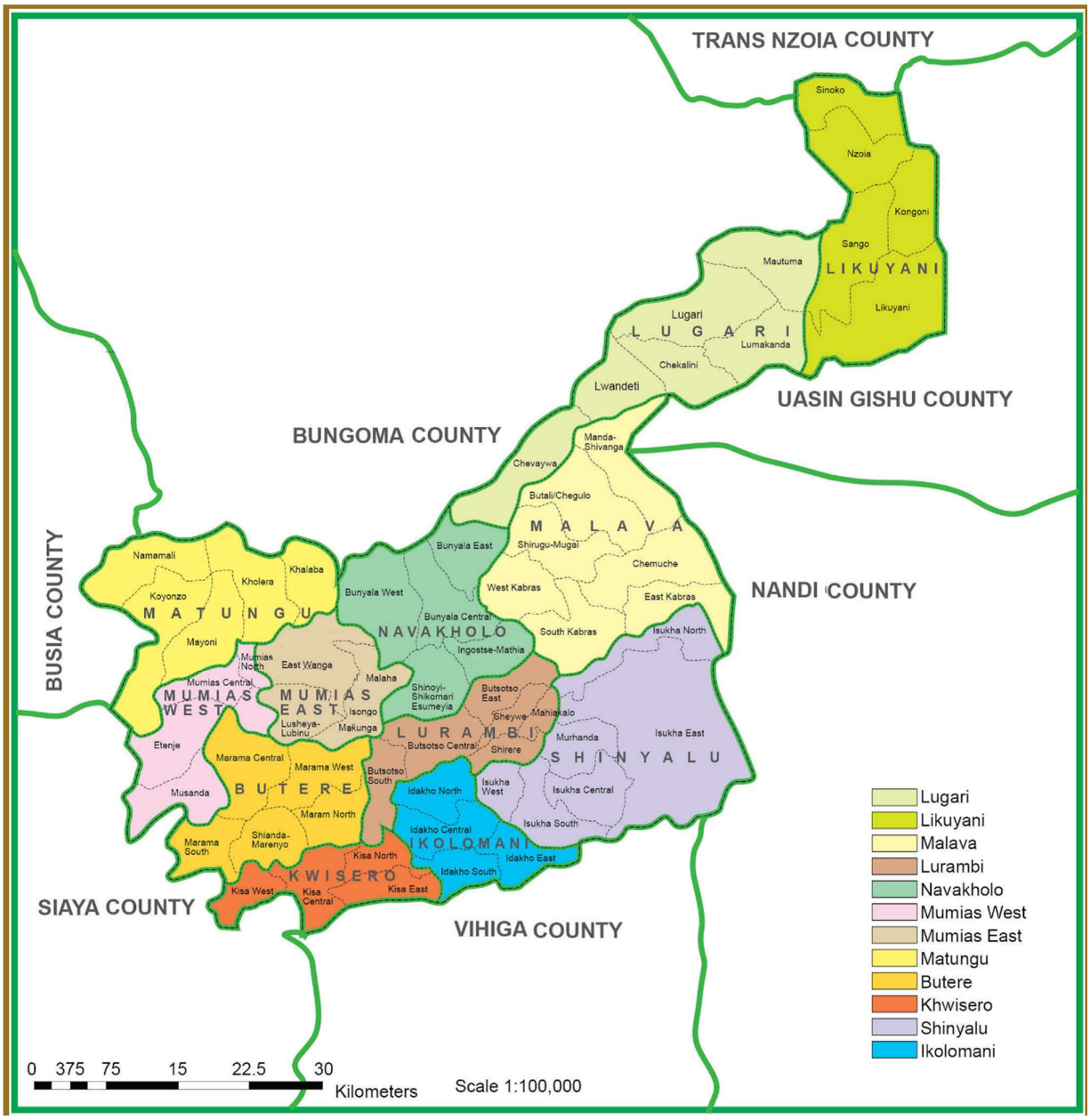
| | | | | | |
|---|---|---|---|---|---|
| Organization image is best | | | | | |
| Other institutions do benchmarking in our institution | | | | | |

## APPENDIX 3: RESEARCH WORKPLAN

| | Topic Search | Proposal Writing | Proposal Submission | Proposal Defense | Data Collection | Data Analysis | Thesis Writing | Thesis Defense |
|---|---|---|---|---|---|---|---|---|
| May-19 | | | | | | | | |
| Jun-19 | | | | | | | | |
| Jul-19 | | | | | | | | |
| Aug-19 | | | | | | | | |
| Sep-19 | | | | | | | | |
| Oct-19 | | | | | | | | |
| Nov-19 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Dec-21 | | | | | | | | |
| Jan-22 | | | | | | | | |
| Mar - 2022 | | | | | | | | |
| July-22 | | | | | | | | |

## APPENDEX 4: RESEARCH BUDGET

| ITEM | QUANTITY | AMOUNT | TOTAL AMOUNT (kshs) |
|---|---|---|---|
| Printing research proposal | 6copies | @5000 | 30,000 |
| Binding | 6copies | @2000 | 12000 |
| Printing pilot questionnaires | 15copies (6pgs) | @2000 | 3,000 |
| Printing improved Questionnaires | 50 copies | @ 2000 | 10,000 |
| Travel expenses | 10days | @ 5000 | 50,000 |
| Printing research project | 6copies | @ 5000 | 30,000 |
| Binding research paper | 6copies | @ 2000 | 12,000 |
| Stationary | | | 10,000 |
| Publishing | | | 40,000 |
| Miscellaneous | | | 20,000 |
| **TOTAL** | | | **217,000** |

**SOURCE: AUTHOR 2022**

## APPENDIX 5: MAP OF KAKAMEGA COUNTY